Gender Budget Watchdog Network

for a gender equal region

Gender Analysis of the Transportation Sector towards Gender and Climate-responsive Policy Solutions

NATIONAL REPORT
Macedonia

With funding from
Austrian Development Cooperation

Sverige

CRPM Center for Research and Policy Making
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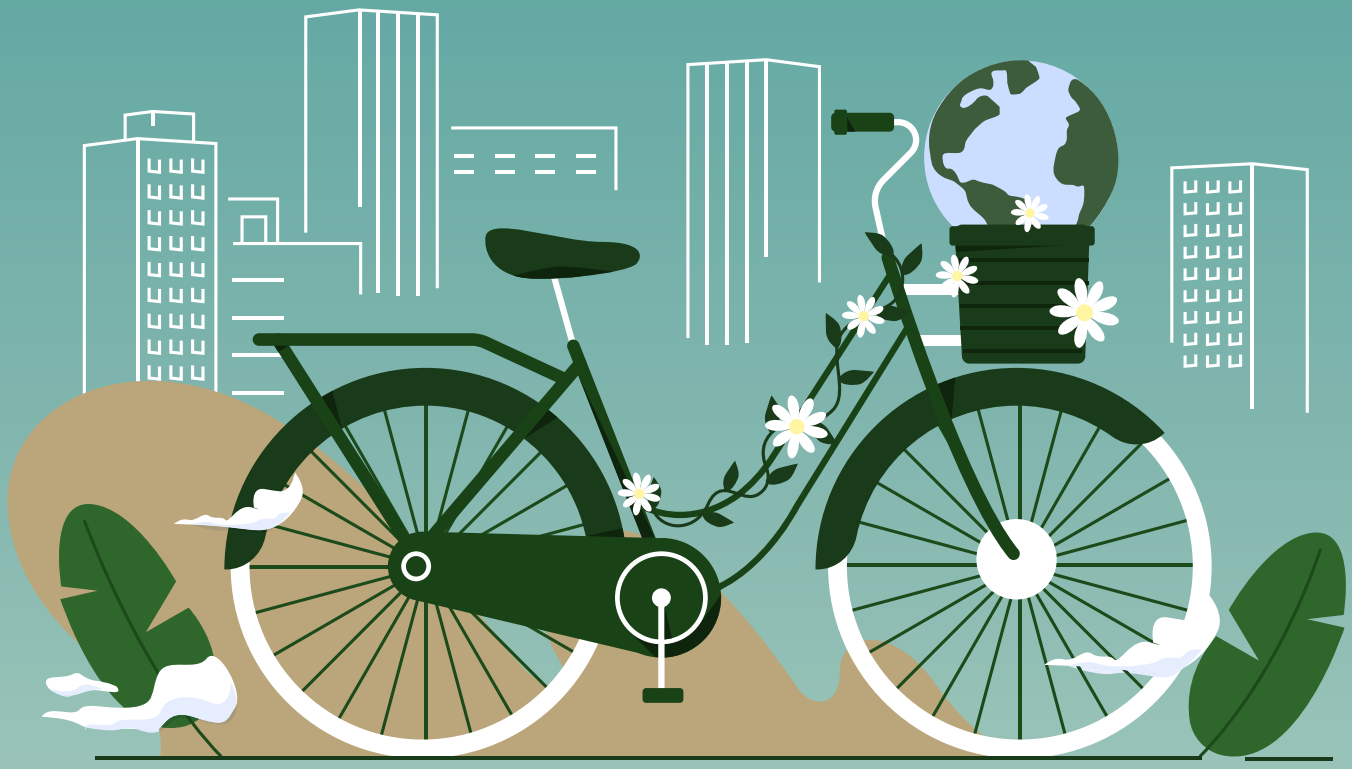

CHAPTER I

Why gender, transport and climate change?

1.1. CLIMATE PERSPECTIVE OF THE TRANSPORT

Transportation plays a crucial role in decreasing greenhouse gas emissions in North Macedonia and the wider Western Balkans region. Like many other parts of the world, this region faces environmental challenges related to air pollution, carbon emissions, and the impacts of climate change. The transportation sector is a major contributor to air pollution in urban areas. Emissions from vehicles, particularly diesel engines, release harmful pollutants like particulate matter and nitrogen oxides. These pollutants have adverse health effects and contribute to smog and poor air quality. The Western Balkans region, including North Macedonia, is striving to reduce its greenhouse gas emissions to combat climate change. The transportation sector is a significant source of CO2 emissions, mainly from the combustion of fossil fuels. In Macedonia, there isn't an established integrated transportation system that would decrease emissions. There is no specific green spatial planning that would contribute to the greening of transport and reduction of GHG emissions.

The transport sector participates with 13 % of the overall national greenhouse gasses emissions in 2014. There is an increasing trend of greenhouse emissions from this category and in 2014 they are higher with 3,6% comparing to 2013, and 16,4% higher than in 2012.[1]

There are three categories that contribute to greenhouse emissions within the transport sector: passenger transportation, railways, and homeland aviation. 99,6% of the emissions in 2019 were from passenger transportation. 0,4% are from railways in 2016, while emission from the homeland aviation is almost 0. There are 26,5% more emissions in 2019 compared to 2014. And 12,4% more in 2019 compared to 2016. In the period between 1990 and 2016, emissions increased by 200%[2].

Passenger transport with 99% is the biggest source of greenhouse gases. There is a need for improvement of the measures and policies that affect the sector. Changes in taxation policies regarding the import taxes and excise duty related to fuels and cars would contribute to decreasing GHG emissions. By promoting cleaner transportation options, such as electric vehicles and public transportation, the region can reduce air pollution and improve public health. Transitioning to low-carbon or zero-emission vehicles, such as electric cars, buses, and trains, is one of the solutions that would help the region meet its emission reduction targets and contribute to global climate efforts.

1 Research center for energy and sustainable development at Macedonian Academy for Science and Arts 2017. Study for the transportation sector analyses of policies and measures STUTRA.

2 [2] Prof PhD Beti Anglevska and Zarko Hadzi Zafirov, Analyses of the development and sustainable planning of transport in RNM from theaspect on influence on climate change aspect, 2023

Reforms on taxation and import policies for passenger vehicles in Macedonia will increase the use of electric vehicles in the country. The analyses[3] show that by 2035 the number of electric vehicles will increase to 40% if there are changes in the policies for environmental taxation. This would include the introduction of identical environmental tax for import of used and import of new vehicles; increasing and leveling the environmental tax for the vehicles that are running on fossil fuels (petrol and diesel ran vehicles). In addition, there should be a reduction of the excise duty not only for hybrid vehicles but also for electric vehicles. Reduction of the VAT on hybrid and electric vehicles from 18% to 5% will also contribute to an increase in the use of electric vehicles. same excise duty for petrol and diesel imports.

In 2019 there was introduction of the new Law on Motor Vehicles Tax. The law is introducing new motor vehicles tax that consider the CO2 emissions of the vehicles, which is a step forward in the introduction of higher use of electric and hybrid vehicles.

Improving the energy efficiency of transportation is another key factor. Implementing fuel-efficient technologies, optimizing transportation routes, and encouraging eco-driving practices can reduce energy consumption and emissions per passenger or ton-kilometer travelled. Additionally, investing in reliable and efficient public transportation systems, as well as promoting active transportation modes like walking and cycling, can reduce the reliance on private cars. This not only cuts emissions but also alleviates traffic congestion and enhances urban liveability.

In the long-term strategy for climate action with the action plan, there are two scenarios for decreasing climate change effects. One scenario is transitioning with usage of the current policies and measures (WEM), and the other is taking into account additional measures and policies (WAM).

WEM Transition is based on current policies: Electrification of the transport sector, higher use of biodiesel and advanced mobility.

WAM Transition of advanced policies: Further electrification of the transport, usage of hydrogen for heavy load vehicles, higher input of biodiesel and advanced mobility.

Bearing in mind that during the period between 2019-2020 few documents from energy and climate change were prepared and adopted, these two scenarios are in line with the scenarios which are part of the energy strategy for 2040, the third biannual report for updating climate change and (TBUR) – report for mitigation - 2020 and the last draft version of the national plan for energy and climate 2020. Besides that, the measures which are part of these documents are part of the long-term strategy for climate action. The scenarios in this strategy are additionally projected for the period 2040- 2050[4].

Alignment with the EU agreement on climate change in Macedonia is still at an early stage. The country has begun to develop a comprehensive climate action strategy, in line with the EU 2030 framework. According to the latest information available, the country planned to start drafting a separate law on climate action (including the transposition of Regulation (EU) 525/2013) by the end of 2019. The Consumer Information Directive has been fully transposed. The conversion level of the Fuel Quality Directive is estimated at 31%.

In terms of national strategies, policy development, funding, monitoring and reporting, WB countries are at different stages in addressing air pollution issues. Furthermore, progress in the field of

3 Research center for energy and sustainable development at Macedonian Academy for Science and Arts 2017. Study for the transportation sector analyses of policies and measures STUTRA.

4 Prof PhD Beti Anglevska and Zarko Hadzi Zafirov, 2023 Analyses of the development and sustainable planning of transport in RNM from the aspect on influence on climate change aspect,2023

climate has been slower than in air pollution. Particulate matter (PM10 and PM2.5), SO2, O3 and NO2 concentrations are often above the yearly average, daily maximum and hourly maximum limits. Transport is one of the main pollutants (together with thermal power plants, industry, residential heating, agriculture and uncontrolled waste burning) they are the main sources of PM10 emissions in the Western Balkans (WB) region. The highest concentrations and the largest number of stations with values above the limits are found in North Macedonia, especially in the municipalities Skopje, Lisice and Kumanovo.[5]

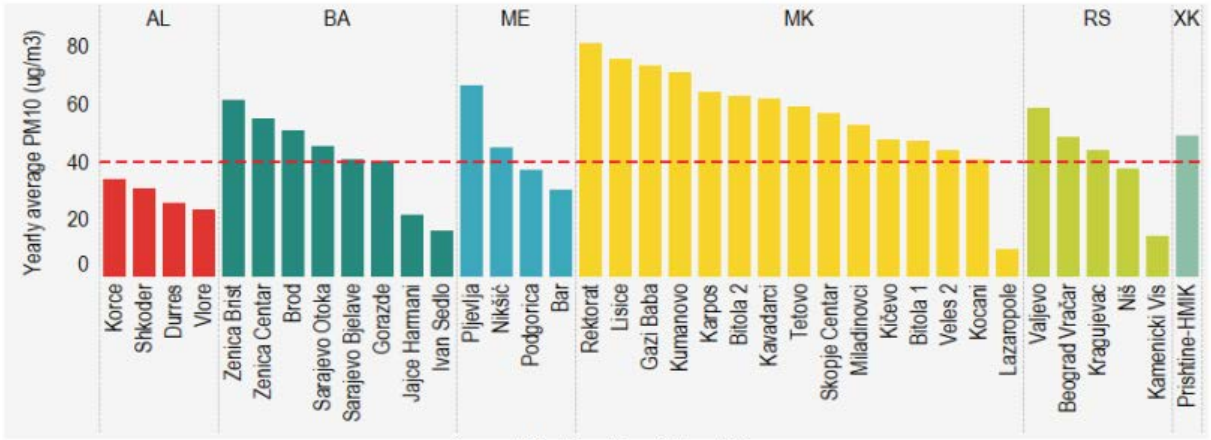

Figure 1: Concentrations of PM10 in WB region

5 Banja M., Đukanović G., Belis C.A. 2020. Status of air pollutants and greenhouse gases in the Western Balkans Benchmarking the accession process progress on environment: https://shorturl.at/ntJOY

1.2. INCREASING RELEVANCE OF TRANSPORT

Data provided by the National Statistics Office – SSO shows that, unlike in any previous period, the number of Macedonian households owning passenger vehicles increased in 2020 to 66,8%. Analysis by statisticians shows that the number of households owning cars in 2021 will increase by 2.6% compared to 2020 but also increase by 5.3% compared to the rate of households owning cars 10 years ago, i.e. 2011. The rising rate of motorization of the country's population is present in all sectors.

Year	Motorcycles	Passenger cars	Buses
2020	12794	429196	2612
2021	15786	477820	2946
2022	18775	483482	2868
2023	22904	552934	3832

Table 1: Registered vehicles per year per type[6]

Due to increased number of new vehicles with Macedonian license plates in 2021 number of passenger cars was 260.1 on 1000 citizens. The increase can be noted compared with the 2020 situation where the number of cars per 1000 citizens was 207,4. Despite the lower level of motorization compared to those of EU member states, the worrying fact is the import of used vehicles. There is a significant increase in the number of registered passenger vehicles in 2023 compared to the registered vehicles in 2022. The same applies to the number of registered buses.

There is difference of ownership of cars among different types of households, 78.4% of agricultural households in Macedonia have reported that in 2021 they own a car, and an identical answer was given by 63.9% of the non-agricultural households, as well as 87.8% of the mixed types of households. When it comes to driving licenses, approximately the same number of women and

6 https://makstat.stat.gov.mk/PXWeb/pxweb/mk/MakStat/MakStat__Transport__RegistraniVozila/150_Trans_regi_veh_by_type_mun_ml.px/table/tableViewLayout2/

men apply for a driver's license each year. According to data from 2018[7] the Ministry of Internal Affairs, a total of 11,520 men obtained a category B driver's license and 9,421 women. According to the Ministry, women are more interested in obtaining a driver's license after the age of 28, while men in the country apply for a driver's license earlier (the number of men who received a driver's license to drive a car by the age of 22 and 27).

The situation with driver's licenses has changed in the last years. It's notably seen that the number of driving licenses issued to women are less than half of those issued to men. The situation is presented below in the table 2

	2022	2023	2024 (by 06 June 2024)
Men	159.979	147.254	95.716
Women	61.652	68.798	52.841

Table 2 Number of issued driver's license by sex for the last years[8]

The data about the number of registered vehicles by sex also indicated that women are less likely to use cars as transportation means as presented by the data related to the number of registered vehicles by year.

	2022	2023	2024 (by 06 June 2024)
Women	90.367	96.618	40.992
Men	444.888	464.551	195.806

Table 3 Number of registered vehicles by year[9]

In contrast to the continuous increase in the number of cars, statistics show that for many years the percentage of bicycle owners in households in North Macedonia has fluctuated between 30 and 40%. In 2021, 37.4% of households nationwide reported owning a bicycle, and as a group, this proportion was highest among agricultural households – 49.7%.[10]

The road transport causes most of the greenhouse gas emissions in North Macedonia. As the number of vehicles increased rapidly from 2016 to 2021, transportation today plays an even larger role in greenhouse gas emissions. One of the biggest problems in the country is the **import of used vehicles.** According to the data from the customs agency, in 2021 alone, more than 37,000 used cars were imported. Over the past five years, more than 160,000 used vehicles have been imported into North Macedonia. In 2021, over 40.000 vehicles were imported out of which 37.832 are used vehicles. In the period between 2009 and 2021, 403.616 used cars were imported in the country which affects directly the quality of air and air pollution as well as the negative impact of climate change[11]. As of recent data, approximately **65% of all vehicles in the country were manufactured before 2002**, indicating a high prevalence of older, less efficient, and potentially more

7 https://faktor.mk/vozachki-dozvoli-vadat-podednakvo-i-mazi-i-zeni-ama-se-povekje-dami-polagaat-za-c-kategorija

8 Source: Ministry of interior

9 Source: Ministry of interior

10 Number of households in North Macedonia with cars twice bigger than those with bicycles | Meta.mk

11 За една година регистрирани дополнителни 59.000 возила на македонските патишта [инфографик] | Meta.mk

polluting vehicles. Moreover, around 85% of all registered passenger cars are over 10 years old. In 2021, the average age of a passenger vehicle reached 20 years, underscoring the aging nature of the vehicle stock.

When examining trends over time (2012–2021), the average age of several vehicle categories—passenger cars, buses, and heavy transport vehicles—has shown a consistent increase:

- Passenger vehicles aged on average between 16.8 and 19.5 years.
- Buses followed a similar trend, with an average age between 16.7 and 19.5 years.
- Heavy transport (freight) vehicles were slightly younger, averaging between 14.7 and 16.9 years.

In contrast, towing vehicles have shown a slight improvement since 2018, with their average age decreasing from 14.3 to 13.3 years, possibly due to targeted renewal or regulation in this segment.

Most used fossil fuels such as diesel and petrol are used. Diesel is the most used fuel with an increasing trend. In 2012, 30,72 % of the passenger vehicles used diesel and in 2021 this percentage is 56,8%. The increase in diesel use, leads to a decrease in petrol use from 66,06% in 2012 to 40,68% in 2021. This has a slightly positive effect on GHG emissions as diesel vehicles emit less GHG than petrol vehicles.

Among other types of vehicles, buses, trucks, towing vehicles, working vehicles and tractors, the predominant fuel is diesel with the increasing trend that reaches 90%. After diesel petrol is the second most used fuel except on motorcycles where the dominant used fuel is petrol. Other fuels have less share with smaller tendencies for increase.

Employees in the transport and storage sector

The number of employees in the transport and warehousing sector in the second trimester of 2024 in N. Macedonia is 25842[12]. Fewer women are employed in the transportation sector than men: only 12.8% of women work in transportation and warehousing, compared to 87.2% of men.[13] Transport is generally seen as male dominated sector especially noting that men are usually drivers of trucks and other means of transport. The women are mostly employed in the administration and legal departments in the transportation and warehousing companies.

12 State Statistical Office: Пополнети и слободни работни места според сектори на дејности, НКД Рев.2, по тримесечја. PxWeb

13 Ibid

1.3. GENDER AND TRANSPORT

The Republic of North Macedonia signed the Council of Europe's Istanbul Convention in 2011. This human rights treaty to Prevent and Combat Violence against Women and Domestic Violence, was ratified in the following seven years later in 2018. The country demonstrated the political will to tackle violence against women. To meet the provisions of the Convention, there is a need to harmonize domestic legislation with the commitments of the Convention. In that direction, the Law on Prevention and Protection against Discrimination was adopted, which by including the basics of sexual orientation and gender identity, expands the protection against discrimination of this group of citizens. The Ministry of Labor and Social standards of the Convention into practice. Government of the Republic of North Macedonia adopted a national action plan for the implementation of the Istanbul Convention, which mainly envisages activities aimed at amending laws to reflect Convention standards in practice.

Regarding feeling safe, the cumulative results of "safe" and "very safe" responses show that women in the Republic of North Macedonia feel safer in their own homes, and they **consider themselves to be in danger in public transportation** and when traveling abroad.[14]

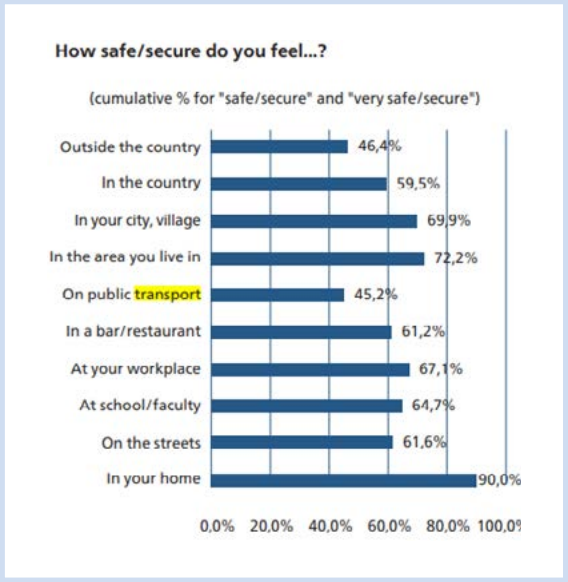

Figure 2: How safe do you feel [15]

14 DEMOCRACY AND HUMAN RIGHTS Marija Topuzovska Latkovikj Mirjana Borota Popovska Ana Chupeska Nita Starova Dragan Gjorgjev December, 2020 WOMEN'S STUDY THE REPUBLIC OF NORTH MACEDONIA 2020/2021
(PDF) WOMEN'S STUDY THE REPUBLIC OF NORTH MACEDONIA 2020/2021 (researchgate.net)

On the other hand, the statistics show that women are notably less likely than men to be involved in criminal activities and the criminal justice system, a trend that extends to juvenile offenders under the age of 18. In the year 2021, women comprised 11% of reported crime perpetrators, 9% of those accused, and the same proportion of individuals convicted of crimes. Furthermore, girls were even less frequently engaged with the criminal justice system compared to adult women, with 11% as perpetrators, 7% as accused, and 8% as convicted offenders in 2021. Among the total of 7,634 adults convicted of criminal offenses in 2021, women accounted for only 9%, while men made up the remaining 91%. Women were particularly underrepresented in cases of homicide, and they demonstrated a significantly lower involvement in road traffic safety violations, with 7% of women convicted compared to 93% of men. In cases of aggravated theft, only 3% of those convicted were women.[15]

Convicted adults by type of crime and sex

	2019			2020			2021		
	total	men	women	total	men	women	total	men	women
Total	4 712	4 302	410	6 351	5 793	558	7 634	6 970	664
Homicide	18	18	0	14	14	0	17	16	1
Bodily injury	258	230	28	291	255	36	306	276	30
Serious bodily injury	87	85	2	74	72	2	93	88	5
Theft	320	289	31	326	304	22	372	349	23
Aggravated theft	622	601	21	481	460	21	655	630	25
Fraud	110	95	15	93	84	9	125	108	17
Abuse of official position and authority	36	28	8	40	33	7	38	28	10
Endangering safety in public traffic	783	729	54	766	697	69	1 045	969	76
Other criminal acts	2 478	2 227	251	4 266	3 874	392	4 983	4 506	477

Figure 3 Convicted adults by type of crime and sex

The study of the World Bank (2020)[16] shows that in the rural areas both women and men consider being pedestrians and cyclists to be difficult. There are no bicycle paths and, as pedestrians, they feel unsafe and scared by the carelessness of drivers and the large number of vehicles. Wherever there is a sidewalk, they run along it, but in many places these places are occupied by parked cars, so they must find another solution, like walking on the street and then back onto the sidewalk. The number of traffic lights is limited. Women in rural areas do not have many options when walking because they often have only one road, no sidewalks and no lights. Bad sidewalks are also a challenge for men, but to a lesser extent because they rely more on personal transportation. Cars drive fast, endangering women and children when walking on the side of the road. That means walking in muddy and unlit conditions with an added risk of confrontations with (stray) dogs. Women tend to face different and/or more severe barriers to mobility than men. Additionally, fewer women are

15 Women and Men in North Macedonia, 2023 Publisher: State Statistical Office: ZeniteMazite_2023_en.pdf (stat.gov.mk)

16 World Bank Document, 2020: *Assessment of barriers and opportunities using Gender and Roma lens in North Macedonia: Case of Transport*

employed in the transportation and construction sectors than men: only 12.8% of women work in transportation and warehousing, compared to 87.2% of men, and only 6.6% of women work in construction, compared to 93.4% of men.[17]

Пазар на труд
Labour Market

Вработени според секторите на дејност и според полот, 2017

Employed persons by sectors of activity and gender, 2017

Сектори / Sectors	Број Number		Структура по пол Sex distribution	
	жени Women	мажи Men	жени Women	мажи Men
Земјоделство шумарство и рибарство Agriculture, hunting and forestry	46 094	74 217	38.3	61.7
Рударство и вадење на камен Mining and quarrying	:	6 282	:	95.5
Преработувачка индустрија Manufacturing	65 024	78 229	45.4	54.6
Снабдување со електрична енергија, гас, пареа и климатизација Electricity, gas, steam and air conditioning supply	1 507	8 900	14.5	85.5
Снабдување со вода; отстранување на отпадни води, управување со отпад и дејности за санација на околината Water supply; sewerage, waste management and remediation activities	1 400	11 251	11.1	88.9
Градежништво Construction	3 525	49 866	6.6	93.4
Трговија на големи и трговија на мало; поправка на моторни возила и мотоцикли Wholesale and retail trade; repair of motor vehicles and motorcycles	47 781	61 088	43.9	56.1
Транспорт и складирање Transportation and storage	4 842	32 927	12.8	87.2
Објекти за сместување и сервисни дејности со храна Accommodation and food service activities	8 948	19 621	31.3	68.7
Информации и комуникации Information and communication	4 999	8 589	36.8	63.2
Финансиски дејности и дејности на осигурување Financial and insurance activities	7 114	3 703	65.8	34.2

Figure 4: Employed persons by sectors of activity and gender, 2017[18]

Women and men have different needs and preferences when it comes to road infrastructure and transport services. **Women tend to use public transportation more than men**. When public

17 Ibid

18 Source: Gender2019.pdf (stat.gov.mk)

transportation is unavailable or unaffordable, women often walk, and their multiple tasks often add to their travel time. These challenges are even more significant for women from minority groups (like Roma women) due to the poor road infrastructure in their neighborhoods. They also reported feeling significantly less safe in public spaces, which may be influenced by both their ethnicity and gender. Moreover, women also have difficulty finding jobs in the transport sector, partly because they feel these jobs are not suitable for women because the sector is largely dominated by men.[19]

The time consumption in Transport

2014/2015	15-24 years old	25-44 years old	45-64 years old	65+years old
Travelling	1.13	0.57	0.49	0.25

Table 4: Average daily use of time of the persons by age by year[20]

The Time use survey carried out in 2014/2015 shows that men use more time for travel to work (0.25h) than women (0,17h)[21]. Same applies for the age groups were the men in age between 25- 44 years use more time to travel to work (0,35h) than women (0,25h) in the same age group. The average time used per day of employed persons aged 20 to 64 is similar for men (0,45h) and women (0,43h).

The same applies for travel related to shopping and travel related to leisure activities.

The women in rural areas spend less time (0,10h) in travel to work and back than the women based in urban areas (0,22h).

Average time used per day of unemployed persons reflect the situation that women spend more time to work at home as they do not travel (0,03h) as much as unemployed men (0,13h).

	Total	Men	Women
Car, motorcycle	23	25	19
Public transport	16	13	19
On foot or bicycle	58	57	60
Unspecified mode	3	5	2
Travel total	**100**	**100**	**100**

Table 5: Structure in % of mode of transport of persons aged 20 to 74, 2014/2015

19 ibid

20 Просечно дневно користење на времето на лицата, по возрасни групи, по години. PxWeb (stat.gov.mk)

21 Average time used per day of persons aged over 10, by activities, 2014/2015

When it comes to means of transport more women are traveling by public transport and by foot or bicycle than men. Men use more cars or motorcycle as means of transport**. This has been also found in** the survey conducted in the frame of the GBWN project, when it comes to the affordability of types of transport, women respondents find cheaper transportation options more affordable than men do. Men tend to find more affordable the more expensive transportation types such as cars, taxis, and e scooters. Compared to men, women find buses as more affordable type of transport. The responses show that women are more frequent bus users than men. More men consider bus transport as unaffordable and expensive. Regarding the car as a type of transport 14,5 % of the total respondents consider it unaffordable and too expensive. 64, 15% (of those 14,5%) are women and 35,85% are men. Less men (48,06%) consider the car transport as affordable but somewhat expensive than 52% women. 59% men consider the cars as very affordable compared to men 10% who consider the cars as unaffordable and too expensive.

The usage of transport differs among women and men due to combination of different factors, such as societal, economic, cultural etc. It is essential to recognize that those factors may vary significantly depending on the region, social norms and individual circumstances.

At EU level there is a lack of regular EU-wide gender data on transport choices, but individual regional studies illustrate consistent trend that **more women than men use public transport**. This is more environmentally friendly than single-occupancy vehicles. **Safety in connection to gender and transport** has several implications. As users of public transport, women are subject to the worrying phenomenon of sexual harassment. At the same time, the ergonomics of vehicles and safety systems do not account for women's physiology, so they are at greater risk in case of accidents than men. [22]

In Macedonia, in 2022, CRPM made research to investigate the behaviors and perceptions of women and men for daily use of transport means, focusing on alternative urban mobility (cycling and walking). The research aimed at locating the root cause of those behaviors as well as to measure the level of carbon footprint awareness among the respondents.[23] The trends from the research are the following:

Women are less likely to own a car and less likely to use it daily. The research showed that women and men use different transport mode, mainly due to the fact that 30% of those not having a driving license are men, while the rest, 70% are women. Having this in mind, it is logical that those 70% (women) that do not have driving license use public transportation or alternative means of transport. Also, from those who use their own car on daily basis (6-7 times per week), 28% are women, while 72% are men. Men drive more kilometers, thus producing more GHG emissions.

Women drivers might be negatively affected by the lack of infrastructure and road facilities on the motorways in the country. Namely, there is lack of communication equipment – emergency telephones on the motorways and highways that would support the women drivers in their transportation. In an era of increased use of electric vehicles to improve electromobility there aren't charging stations along the motorways/highways to secure continuous and comfortable driving. There are 18 charging stations in the cities and towns around the country and 19 in the City of Skopje. The charging stations are placed in public parking areas, and private frequent areas such as hotels and shopping centers. But there aren't charging stations on motorways. There is a need for placement of the charging stations on motorways so the users can charge the cars during their intercity travels. It's also important for women drivers who are transiting the country.

22 STUDY Requested by the FEMM committee; Women and transport (europa.eu)

23 The research was done in one of the biggest municipalities in Skopje, which has both, rural and urban part, within the project "Healthy habits for healthy environment", financed by UNDP, 2022

Women use alternative means of transport more than men. 60% from the respondents that own a bike are women. Also, women tend to walk on daily basis more than man (75% that do not practice walking are men). The socio-economic factor plays its role when choosing the means of transport. 80% of those who use alternative means chose this way of transport to save the transport costs. The greatest barrier for the women to use alternative means, such as bicycle, is the current infrastructure (not enough bike trails, no proper lightening, lack of trail maintenance etc.)

Women are more aware than men of the environmental issues related to transport. Great percentage, 70%, who answered that they do not care for the climate change phenomena are men, while on the other hand, more than 65 % who cycle on daily basis, and do this for the environmental cause, are women. In addition, 65% who believe that the air pollution in Skopje is due to the great car usage on daily basis, are women.

It is assumed that the trends are pretty much the same in all municipalities in the capital, and other urban areas with bike trails and public transportation. On the other hand, transportation in rural areas in Macedonia, as in many rural areas worldwide, can pose unique challenges and considerations.

A social mapping research conducted by CRPM in 2021, in a municipality with limited public transport, and limited bicycle infrastructure, points out several trends[24]:

Women from the rural areas are at high risk of isolation and social exclusion. Due to lack of public transport connection and its low frequency, women face challenges to access the essential services like health cares, education and employment.

Safety concerns are significant for women. Most of the women walk to reach their daily destinations or use bicycles (those who own ones). Roads are with limited sidewalks and bike trails, usually with limited or no lightening at all. The risk of accidents and the risk of experiencing sexual harassment are present and pose additional pressure on women.

Limited mobility due to traditional gender roles. Gender roles in the rural areas often assign women the responsibility of household chores, caregiving and food production. Men are those usually owning and using the family cars, and in most of the cases, women highly depend on them. Similar gender roles are also perceived in some urban areas too depending on the cultural background of the population and respect of traditional norms.

To improve the general state of transportation for women in Macedonia, encompassing both rural and urban areas, a comprehensive approach is crucial. Urban centers like Skopje, require solutions focusing on safety, accessibility and affordability. This includes ensuring safe public transport with increased security measures and many transport options. In rural areas, distinct challenges like limited or no access to public transportation must be addressed. This involves investment in infrastructure, community-based solutions, and safety measures.

Ultimately, data-driven decision making, with focus on understanding women's transportation patterns and needs, is essential. By addressing the women's needs, Macedonia can foster a more equitable, inclusive, and accessible transportation system that empowers women and supports their participation in all aspects of life.

24 The social mapping was conducted by CRPM within the SORI II Project, with support of the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbHand the Network of Associations of Local Authorities of South-East Europe


ECO

CHAPTER II

Gender responsiveness of policies and budgets

2.1. BALKAN GREEN AGENDA AND TRANSPORTATION AND ITS RELEVANCE TO SGDS

The vision for cleaner, safer, smarter, greener, resilient, competitive, and sustainable transport is one of the key drivers of transport policy in both the European Union and Western Balkans region. On the EU level, it represents a centerpieces of the agreed EU Green Deal and EU Sustainable and Smart Mobility Strategy published in December 2020, while on the regional level – it is part of the Green Agenda for the Western Balkans (endorsed by the Sofia Summit's Declaration) and the European Commission's Economic and Investment Plan for the Western Balkans.

Sustainable, smart, and resilient mobility in Western Balkans by 2050 means:

- zero-emission vehicles and available alternative fuels infrastructure on Western Balkans roads, railways, ports, and airports.
- more travelers using fast railway connections between regional urban areas across a wider region. integrated multimodal climate neutral solutions in the cities.
- efficient, punctual, and competitive rail and waterborne freight transportation.
- More reliable information to users and decision makers on the environmental impact of transport.
- seamless travel across the region using sustainable mobility choices, including single tickets for multimodal transport.
- Digitally connected supply chains balanced across modes, and electronic data exchange without delays.
- Safe and fast travel, and a quality network ensured by TEN-T standards and services, enabling resilience to climate change effects (such as floods).

- a single interoperable transport market without physical and non-physical barriers for doing business and travel.
- a workforce adjusted to the changing digital environment with high level of protection of worker`s rights. Objectives, measures, and milestones described in the following chapters demonstrate how these will be possible

The Green Agenda will contribute to reaching the SDG indicators.

Direct Transport Targets of the SDG are:

Sustainable Development Goal	Indicator
Goal 3. Ensure healthy lives and promote well-being for all at all ages	3.6 By 2020, halve the number of global deaths and injuries from road traffic accidents
Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all	7.3 By 2030, double the global rate of improvement in energy efficiency
Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	9.1 Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all
Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable	11.2 By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons
Goal 12. Ensure sustainable consumption and production patterns	12.c Rationalize inefficient fossil-fuel subsidies that encourage wasteful consumption by removing market distortions, in accordance with national circumstances, including by restructuring taxation and phasing out those harmful subsidies, where they exist, to reflect their environmental impacts, taking fully into account the specific needs and conditions of developing countries and minimizing the possible adverse impacts on their development in a manner that protects the poor and the affected communities

Table 6: Direct transport targets of the SDG

Indirect Transport Targets of the SDGs are:

SDG	Indicator
Goal 2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture	2.3 By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment
Goal 3. Ensure healthy lives and promote well-being for all at all ages	3.9 By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination
Goal 6. Ensure availability and sustainable management of water and sanitation for all	6.1 By 2030, achieve universal and equitable access to safe and affordable drinking water for all
Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable	11.6 By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management
Goal 12. Ensure sustainable consumption and production patterns	12.3 By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses
Goal 13. Take urgent action to combat climate change and its impacts3	13.2 Integrate climate change measures into national policies, strategies and planning

Table 7: Indirect transport targets of the SDG

2.2. COUNTRY POLICY ON TRANSPORT

The legal framework and policies related to the transport sector consist of a set of laws that are directly linked to transportation, such as laws for different types of transport. In addition, there are laws and bylaws (See Annex 2) which are not directly linked to transport, but they affect the sector from a gender perspective. Such laws are the construction laws and bylaws which regulate construction and reconstruction of roads and road infrastructure.

The table below provides an overview of the regulations and strategies and gender related aspects.

Legal Framework	Gender-related aspects
Law for public roads, (Official Gazette 84/08)	The law regulates the public roads operation including construction and maintenance. The law does not include gender neutral terms its men centred. It does not include gender cantered articles. This law provides possibilities for inclusion of gender perspectives.
Law for road transport	This law regulates the road transport of people and goods. In regulates the relations of the transporters as well and the infrastructure linked to the road transport such as bus stops and stations. The Law does not include gender neutral terms. Its men centred and gender blind. This law provides possibilities for inclusion of gender perspectives.
Law for agreements in the road transport (OG.23/2013; 156/2015)	This law regulates the relations that are part of transport agreements for passenger's and goods' transport in the national and international road traffic. The Law does not include gender neutral terms. Its men centred and gender blind. This law provides possibilities for inclusion of gender perspectives.
Law for road traffic safety (OG 169/15)	This law regulates the security and protection on the roads, relations among the participants and other subjects on the road traffic, rules on the road traffic, system of the road signs, equipment and signalisation on the roads, responsibilities in the case of traffic accidents, traffic schools, candidates for drivers, test centres for drivers, drivers, training for management and gaining rights to drive as well the crime code for children, special measures for safety, organisation and tasks for road safety, data handling and protection, code of conduct and bylaws. The Law does not include gender neutral terms. Its men centred and gender blind. This law provides possibilities for inclusion of gender perspectives.

Law on railway system (OG 91/2013)	This law regulates the organisation and functioning of the whole railway system in the country including the infrastructure and the service provision for passenger and transport of goods. This law provides possibilities for inclusion of gender perspectives in some aspects, such as concessions, gender mainstreaming of issues etc. The Law does not include gender neutral terms. Its men centred and gender blind. This law provides possibilities for inclusion of gender perspectives.
Law for safety in the railway system (OG 09/20120)	This law regulates the manner and the conditions for securing safety in the railway system that includes safety requirements for the system as whole, including safety management with infrastructure and traffic operations as well cooperation between rail transporter and the management of the infrastructure. The law is men centred and gender blind. This law provides possibilities for inclusion of gender perspectives.
Business plan 2022 Macedonian Railways Transport	There aren't any gender specific expenditures listed. There isn't budget distribution and gender measures for employed women and/or women as users of the plan.
Construction law, (consolidated text available at: mioa.gov.mk, OG 130/09 at mtc.gov.mk)	Norms that affect gender equalities are set as a major norm. They are later more specified in the relevant rulebooks. Article 11 secures that the construction and reconstruction of pavements/ sidewalks/ public areas/walking areas have to be adjusted to needs of persons with disabilities specifically for persons with visual impairments.
Rulebook for technical elements for construction and reconstruction of roads and objects on the roads. Official gazette: 110/ 03.09.2009.	The rulebook specifies norms and defines designs for roads' construction and reconstruction. The law defines the bus stops, rest and service areas, aid/ help and information of the road users from construction perspective. It does not specifically elaborate on the design of the bus stops.
Law for Environmental Protection and set of rulebooks related to EIA/ SEA procedures and contents	This Law includes the principles of EIA/SEA set in 2006. Since there is new EC Directive 2014/52/EU for simplification of the process the EIA/SEA legal structure require update. Gender Impact Assessment is not set as a separate part of the process of EIA and SEA. However, the SEA includes the social impact assessment that tackles the impacts of the construction sites on the respective settlements along the construction sites of the roads and highways, including potential impacts on safety of women along the construction sites.
Law for determination of public interest and nominating strategic partner for implementation of the project for constructuin of the infrastructure Corridor 8 Tetovo – Gostiar Bukojachani and the project for highway Trebenishta Struga Kjafasan and Corridor 10 Prilep-Bitola in Republic North Macedonia	The law determines the strategic national importance for the corridors 8 and 10. The Law determined the consortia Bechtel and Enka JV to realise the project and has authorised the Government to lead the contracting process for construction. The Law enables the consortia to implement "unique process of construction, planning and implementation" This is special treatment of the constructor without determination of the how the unique process will be implemented regarding implementation of the relevant existing laws. There is no concrete implementation of SEA for the construction of the roads so far[36]. This indicates that there is no Social Impact Assessment produced that would integrate potential impacts on safety of women during the construction phase of the corridors.
Law on railway system	The law sets general regulations for operation and organisation of the rail system. There are no specific areas that might influence gender equality. The Law does not include gender neutral terms. It's a men cantered law and its gender blind.

National Transport Strategy 2018-2030	It presents national effort to align with the EU TEN-T network, respecting the universal mobility right in line with the rules and regulations of the EU. Regarding legal framework there is fragmented approach as in the law there isn't legal act that will carry the strategic goals of the national strategy. Only few laws arrange the prevention of GHG emissions from the vehicles in all types of transportation. The strategy is gender neutral but bearing in mind the gender roles in transport sector the strategy needs revision and GIA to include gender perspectives. The vision of the strategy includes young, older and people with disabilities.
Annual Programme for construction. Reconstruction, rehabilitation, maintenance and protection of public roads for 2024	The programme is gender blind in the section where gender equality applies, such as investments in the work of staff and the needs of staff.

Table 8: Legal framework and gender related aspects of it

The transport regulations are mainly men centred; disregards gender - is gender blind. The relevance of the construction law in transportation sector is crucial when it comes to regulative linked to construction and reconstruction of roads. The construction law specifically considers: the needs of persons with disabilities, safety in constructions and buildings, prescribes set of Rule-books that defines structure of the public space including roads. In addition, rulebooks linked to construction law provide description for the set of criteria for monitoring the implementation of specific construction rules. Rulebook for bus stations and Rulebook for technical elements for construction and reconstruction of roads and objects on the roads are missing explanation of the prescribed designs which also affects the work of the architecture design companies, which do not consider gender sensitive construction. Lack of gender awareness, even among architecture design companies is visible in the realised construction solutions on the ground.

It is possible to observe that Construction Law include some progressive elements such as the consideration of the needs of persons with disabilities (PWD), health and safety, and other aspects regarding universal designs. Moreover, there are some interesting initiatives such as the Draft Strategic Plan of the Ministry for Transport and Communications 2022-2024 which considers gender budgeting for the first time. Yet, this Plan does not indicate how this gender budgeting will be implemented (beyond guidance on interventions for social housing).

Besides these initiatives, it was possible to observe that most instruments are gender blind, and those that do consider gender, have a binary approach to it.

It is important to mention the proposal of the Law on climate action, which predicts the finance mechanism for GHG emissions, and the usage of the funds. The funds are to be part of the budget of the MOEPP, which will oversee the implementation of the law. The distribution of funds will be through an annual program for financing activities for climate action, which is proposed by the Minster according to activities in the planning documents. The activities that can be implemented are de-carbonization of the economic operators and decreasing of emissions per unit products, energy efficiency, green transition, sustainable production and energy transformation, strengthening social cohesion and support the coil regions to their transition, support to vulnerable and poor users, production of inventories of GHG emissions, production of reports for policy system, measures and projections, realization of activities for investments linked to climate, activities for climate change education, building public awareness, gender aspects of the climate change, youth and vulnerable groups.

2.4. INSTITUTIONAL FRAMEWORK FOR TRANSPORT

In North Macedonia, multiple stakeholders hold the responsibilities for organization of transportation and climate sectors. The Assembly of North Macedonia hosts the **Commission on Transport, Digital Transformation, Environment and spatial planning** overseeing road, rail, air, postal, and telecommunication systems, including cable cars and broadcasting. The commission also regulates infrastructure construction, urban planning, land management, and environmental protection. This includes efforts to counter pollution across land, air, and water, ensuring a healthy environment. It also governs noise prevention, safeguards against harmful radiation, especially from nuclear energy, and fosters international cooperation on transport, communication, urban development, and ecological issues. When it comes to the decision making in the Commission and representation of women in the body it can be noted that the Commission is men dominated. The Commission is constituted of 22 Members of parliament out of which only 2 are women and 20 are men[25]. The president and the deputy president of the commission are both men.

The **Ministry of Transport and Communications** is primarily responsible for the transportation sector, setting policies, strategies, and regulations on a national level and has jurisdiction over the road traffic and road infrastructure; railway traffic and railway infrastructure; air traffic and aviation infrastructure; inland navigation; telecommunications and telecommunications infrastructure; broadcasting and its infrastructure; postal traffic and postal infrastructure; other types of transport and infrastructure that is necessary for carrying out transport; residential and communal works, the appropriate infrastructure, the arrangement of the space and the management of the construction land owned by the Republic, etc. The decision making in the Ministry is men dominated. The structure of the Ministry is constituted from Minister which is man and deputy minister and secretary who are also men. The sectors are led by 2 men and 7 women[26]. Despite that, it can be said that the Ministry has a men dominated top positions and decision-making roles.

The basic competence of **the Ministry of Environment and Physical Planning (**MOEPP) is the protection and improvement of the environment in the country. As well the Ministry is responsible for collecting information for the inventory of greenhouse gas emissions and the emissions of pol-

25 Sobranie.mk

26 Information obtained from the Ministry of Transport access to public information

lutants, as part of the reporting obligations to the international institutions (such as the UNFCCC, EEA). The Ministry continuously, throughout the year, collects and processes data on emissions in the air (e.g., measurements of air pollutants concentrations), through which the state of the air quality is monitored.

When it comes to the decision making in the ministry, the Ministry of environment and physical planning is led by a man as a Minister and a woman as Deputy Minister. The Ministry in its framework has 7 institutions which are led by 2 women and 5 men.

The Ministry has 5 state councilors and only 3 out of 5 positions are filled. Two are held by women and one is held by man.

Same doesn't apply for the heads of 9 sector where for 8 sectors heads are women and there is 1 men head of the sector. In general, the Ministry's top positions are men dominated, but the sectors are led by majority of women.

Public Enterprise for State Roads (PESR) is responsible for projection, planning, construction, maintenance and financing public state roads. In most cases in smaller municipalities, the main regional roads are part of the road network in the towns and villages. Therefore, they influence the infrastructure on a local level including lighting, pavements and signalization. The management structure of PESR is male dominated. There is only one woman in the managerial structures of the Enterprise. She is a member of the board of directors. The rest of the board including the Supervisory Board for Control of the Material, as well and the director are men[27].

Public enterprise Macedonian Railways – Infrastructure, is responsible for maintenance and development of the rail infrastructure. Their role is in the building and reconstruction of the railway network and the objects of the railway network. Management board of the enterprise is constituted of 3 members out of which 2 are women. Supervisory board is also constituted of 3 members out of which 2 are women. The Director is man and there are 2 women in the management team constituted of 6 members excluding the director.[28] The Public enterprise Macedonian Railways has gender balanced decision-making bodies.

Public Enterprise MZ Transport AD Skopje, responsible for rail transport and operations of the railways. The enterprise management is men dominated as there is no woman in the management team[29].

The Office of the Deputy Prime Minister for Economic questions is responsible for reaching the sustainable development goals and is national key point for the Green Climate Fund (GCF). The Deputy Prime Minister is man.

The National Committee for climate change was founded by the Government and is an overall political platform which secures high levels of support for development and realization of activities linked to climate change. The committee is made up of the stakeholders nominated from national institutions, academia, private sector, civil society and coordinators for climate change appointed at the ministries. There is no information available on the gender structure of the committee.

Technical groups in the Sustainable Development Council and other stakeholders from the Government and civil society also participate in the process of policy creation regarding climate change. There is no available information about the gender structure of the Technical Group neither the Sustainable Development Council

27 https://roads.org.mk/en/about-us/management-structure/ as of 12 July 2024

28 https://mzi.mk/en/management/

29 https://mzt.mk/%d0%bc%d0%b5%d0%bd%d0%b0%d1%9f%d0%bc%d0%b5%d0%bd%d1%82/

Regulatory Commission for Energy and Water Services which is deciding on the tariffs for energy and water as well and waste water treatments.

Local self-governments play a crucial role in implementing measures to combat climate change at the grassroots level. The strategic plan for 2021-2025[30] by the Association of Local Self-Government Units of the Republic of North Macedonia, which encompasses all municipalities, has prioritized the execution of the GREEN AGENDA at the local level. This lays the foundation for future action planning on a localized scale. Moreover, based on environmental protection laws like the Environmental Law, Ambient Air Quality Law, Waste Management Law, among others, these local self-government units' shoulder numerous responsibilities to tackle pollution effectively.

The local self- governments are responsible for the local public transportation, construction and maintenance of the network of local roads. In addition, the municipalities are responsible for operations and maintenance of the local transport including local bus stations and the bus stops.

Usually, the local self-governments in the bigger towns or cities have founded **public companies** that provide public bus transportation services and public companies that oversee construction and maintenance of the local road networks.

There are only 2 women elected mayors out of 81 municipalities in Macedonia. There are 79 men mayors in the country.

In overall it can be stated that the transport sector stakeholders are dominated by men in decision making and executive powers. There is a need for higher involvement of women in the leading positions and seats in the decision-making bodies.

The country is actively engaged in various initiatives spearheaded by **global organizations and funds** to combat climate crisis. At present, North Macedonia is a part of five projects overseen by the Green Climate Fund. These projects emphasize the Energy Efficiency in Buildings Program, Sub-national Climate Fund Global, Cooling, and Green Cities Facility, accumulating a total funding of $46.2 million[31]. For each project under this initiative, a Gender Assessment is mandated. This assessment aims to highlight and address gender-specific concerns, discrepancies, and challenges. Additionally, it's compulsory to formulate Gender Action Plans. These plans are designed to integrate the findings from the gender analysis, ensuring that both male and female perspectives are incorporated into the project's framework. Such documentation lays a robust foundation for incorporating gender considerations into subsequent projects, especially those concerning transportation, a sector significantly impacting climate change.

FAO supported the Government to develop and submit its first GCF Country Work Programme, addressing key climate change priorities in priority sectors – energy, transport, water resources, agriculture, waste, biodiversity, health, forestry, and cultural heritage – and scoping potential investments that could be translated into full-funding projects for the GCF, aligned with national development and climate priorities, as well as the SDGs and GCF investment criteria[32]

The grants of Global Environment Facility (GEF) and policy support help developing countries address their biggest environmental priorities and adhere to international environmental conventions. Over the past three decades, the GEF has provided more than $23 billion and mobilized $129 billion in co-financing for more than 5,000 national and regional projects. GEF SGP has been

30 Strategic plan of ZELS 2021-2015 https://zels.org.mk/Upload/Documents/Strateski%20plan%20-%2030.11.2021_6.pdf

31 Green Climate Fund - Country profile https://www.greenclimate.fund/countries/north-macedonia

32 https://northmacedonia.un.org/en/186311-green-climate-fund-country-programme-and-call-private-sector-climate-action-lay-foundations

present in North Macedonia since 2005. Until now, 153 projects have been awarded in the amount of 2,919,096 US$ generating 3,211,351 US$ in co-financing (in cash and in kind)[33].

The development objective of the Sustainable Energy (GEF) Project of North Macedonia is to develop a sustainable market for energy efficiency (EE) and renewable energy (RE) by supporting the development of an enabling framework, institutional capacity, and necessary financing mechanisms. Weak implementation capacity and a smaller-than-anticipated market response have resulted in slow progress towards DO achievement. In recognition of the key role to be played by the public sector in the development of a market for EE, it is proposed that the project be restructured to provide support for the development of Government's National Program for EE in public buildings which is to be implemented using market based mechanisms and to bring to an end its pursuit of an energy service company (ESCO) model. The restructured project will continue to support market-based financing of EE and RE through a dedicated facility[34].

2.5. BUDGETING - WHAT HAS BEEN FUNDED IN THE TRANSPORT AREA?

2023 Budget envisages capital expenditure in the amount of 48.9 billion MKD (791 mil EUR). Most of the capital expenditures are for the infrastructure projects road and railway infrastructure, energetic infrastructure as well as sewage and communal infrastructure.

As for the *road infrastructure*, main projects are widening of the motorway Tetovo-Gostivar, construction of the new motorway Trebenishta-Struga- Kjafasan, Construction of the road section Gostivar- Bucojcani and Prilep-Bitola. Continuation of the construction of the eastern part of Corridor

33 https://www.thegef.org/projects-operations/country-profiles/north-macedonia

34 https://documents.worldbank.org/en/publication/documents-reports/documentdetail/564901468270017449/macedonia-sustainable-energy-gef-project-restructuring

8 and western part. Eastern part section Rankovce - Kriva Palanka as well as the section from Kriva Palanka to the border crossing point with Bulgaria. As for the western part of corridor 8 sections Kichevo – Bukojani and the section Kichevo – Ohrid. EBRD loan is planned for the highway section from Skopje to Blace. Total sum of investments for road infrastructure - Government programme 2M- Investments in road infrastructure 15.000 milion MKD (244 mil EUR).

Investment in *Railway infrastructure* is planned as completion of the railway corridor 10, as well as reconstruction of the eastern section of the corridor 8 Kumanovo - Beljakovce - Kriva Palanka. Total invesmtents are in amount of 2.834 mil MKD (46 mil EUR)

Climate changes

Although there is no budget programme or appositions for Climate changes, the following calculations done by adding up several budget positions and programmes.

1. Government function for Environmental protection 2.445 mil MKD (39.6 mil. EUR)

Break down as:

a) Environmental protection 1.341 mil. MKD (21.84 mil EUR)

b) Waste management 240 mil. MKD (3.9 mil EUR)

c) Wastewater management 100 mil. MKD (1.63 mil EUR)

d) Reduce of the pollution 765 mil. MKD (12.44 mil EUR)

2. Then in the Ministry of Environment there are two programmes: 1. Protection of the environment and 2. Environmental improvement

The first programme, Protection of the environment in total amount of 1.333 mil MKD (21.67 mil EUR) has 6 sub-programmes:

a) Wastewater management and water protection - 329 mil MKD (5.35 mil EUR)

b) Air quality – 52 mil MKD (846 k EUR)

c) Wastewater treatment – 717 mil MKD (11.7 mil EUR)

d) Solid waste treatment – 188 mil MKD (3.05 mil EUR)

e) Dojran Lake – 7 mil MKD (650 k EUR)

f) Waste treatment and water purification stations in Ohrid and Struga 40 mil MKD

Second programme, Environmental improvement, in total amount of 380 mil MKD (6.18 mil EUR)

3. **Ministry of Transport and Connections**

Project for water supply and wastewater drainage – 349 mil MKD (5.7 mil EUR)

4. **Government programme for Improvement of the environment - sub programme for Green Development 100 mil MKD (1.6 mil EUR)**

Total amount for climate changes as a function is the previous budget position is approximately 4.6 billion MKD (75 mil EUR)

Institution's Budgets

Ministry of transport and communications In its budget for the year 2024 in the line investments in road infrastructure predicts only 15.100.000.000 MKD for traffic and infrastructure, capital subsidies for business and nongovernmental organizations for realization of the projects according the Law for conclusion of public interest and nomination of partner for the strategic partner and implementation of the Project for construction of infrastructural corridor 8 (section Tetovo – Gostivar – Bukojchani and project for motorway Trebenishta – Struga- Kjafasan) and corridor 10d (section of the highway Prilep- Bitola[35]. The budget of the Ministry is just presented and there is lack of narrative how it was developed, if there were consultancies made with its users, etc. The annual report about the progress of equal opportunities of men and women 2024 is not available online, and there are no gender budget initiatives from the Ministry of Transport reported in the Annual report for the undertaken activities and achieved progress in establishment of equal opportunities of men and women in Republic N. Macedonia in 2022.

There are not available reports on gender responsive budgeting online for the **Ministry of Environment and spatial planning**, but the Annual report for the undertaken activities and achieved progress in establishment of equal opportunities of men and women in Republic N. Macedonia in 2022 of the Ministry of Labor and Social Policy includes the gender budget initiatives from the Ministry of Environment. The allocated budget from the Ministry of Environment and Physical Planning was 98.000.000 denars. Among the programs and the projects related to drainage systems, air quality, biodiversity, public awareness and education, nature protection, allocation of the budget is also provided for project funding. There is reported that 29 projects out of 84 projects have been with certain criteria for gender sensitive characteristics. The budget of the **Ministry of Environment and spatial planning** Is not available online. The same applies for financial reports.

There is information about the total amount of funds collected by the MOEPP from the fees paid by legal and physical entities for polluting the environment, specifically for vehicle use[36], in the period from April 17, 2022, to 2024.

35 https://roads.org.mk/wp-content/uploads/2024/01/%D0%93%D0%BE%D0%B4%D0%B8%D1%88%D0%BD%D0%B0-%D0%9F%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%B0-%D0%B7%D0%B0-2024-%D0%BD%D0%B0-%D0%88%D0%9F%D0%94%D0%9F.pdf

36 This relates to the recent changes in the Law on the Environment, which introduced an increase in the tax for car registration. Questions from Members of parliament to the Minister for Environment and Physical planning on 26th of December 2024

Funds Collected - The Ministry confirmed that the fees collected from the vehicle pollution tax are being systematically tracked, and they are presented in the table below:

Year	Means
2022	249.171.335,00 MK Denars
2023	330.395.176,00 MK Denars
2024 up to 26.12.2024	330.190.216,00 MK Denars

The fuds are than distributes in various programs of the Ministry are including the programs that have been reported in the Annual report for the undertaken activities and achieved progress in establishment of equal opportunities of men and women in Republic N. Macedonia in 2022of the Ministry of Labour and social policy.

Public Enterprise for State Roads has not submitted its annual report to the Ministry of Transport in 2022[37] . There is no available report online. The budget of **PESR** is not available online. The available financial report for 2023 of the PESR is gender neutral.

Public enterprise Macedonian Railways- Infrastructure hasn't submitted its annual report[38] for the progress of situation of equal opportunities of men and women for 2022. The budget of Public Enterprise Macedonian Railways – Infrastructure is not published online. There are only annual financial reports available. The report for 2023 is gender neutral[39].

Public Enterprise MZ Transport AD Skopje has not submitted the annual report for the progress of situation for equal opportunities between men and women in 2022. On the website there is only a short overview of the budget in 2018. There is no data publicly available concerning their current budget and there are no reports made available.

City of Skopje prepares the report for the progress of situation for equal opportunities of men and women annually. The last report consists of information regarding strategy for gender equality, action plans and programs for gender equality. The Annual report related to equal opportunities for women and men, reports that the created strategies and programs for social, children and health protection, culture, local economic development, taxation environmental protection, urban development and planning are gender mainstreamed. The programs include the interest of men and women, boys and girls and persons with disabilities. Therefore, there has been a gender responsive budgeting process.

Public Transport Company JSP Skopje does not submit annual report on the progress of situation for equality between men and women for 2022[40]. There is published a financial report for 2023[41] where there is presentation of sex disaggregated data of the number of employees in the company. Apart from that information it's not visible whether the report has been made to indicate that the budget has been made in a gender responsive manner or not.

37 ANNEX 1 The list of the institutions which have submitted the reports Годишен извештај на ЕМ на жените и мажите во 2022.pdf (mtsp.gov.mk)

38 Годишен извештај на ЕМ на жените и мажите во 2022.pdf (mtsp.gov.mk)

39 Годишен финансиски извештај за 2023 година – МЖИ (mzi.mk)

40 Годишен извештај на ЕМ на жените и мажите во 2022.pdf (mtsp.gov.mk)

41 http://www.jsp.com.mk/Upload/dokumenti/%D0%93%D0%BE%D0%B4%D0%B8%D1%88%D0%BD%D0%B0%20%D1%81%D0%BC%D0%B5%D1%82%D0%BA%D0%B0%20%D0%B7%D0%B0%202023_.pdf

The Public Company Streets and Roads Skopje has not published its budgets nor the financial reports. There is no information available concerning the GRB processes in the company.

Long term Investments

The long-term investments in the transport sector are an integral part of the adopted **National Transport Strategy 2018-2030.** The strategy defines objectives that are reflecting changes in the legal framework, improvements in mobility, infrastructure investments, green transport, alignment of the national transport regulative with the EU aquis. The overall objective of the National Transport Strategy is to develop a harmonized transport sector that is internationally compatible and integrated in the TEN-T system that stimulates the economic and social development of the country, preserves the environment, and secures the needs of future generations.

N.	General Objectives	Targets
GO1	**Strengthen EU integration and promote regional cooperation** *International dimension of all transport modes*	**Completion of SEETO Core and Comprehensive *Road and Rail* Network passing through the national territory (defined as *TEN-T Comprehensive Network in the South East Europe- SEETO/TeTC*)**
GO2	**Contribute to the improvement of the economic sustainability at the national level** *National dimension of all transport modes & urban transport*	**Improvement of country ranking in World bank Logistics performance index (in 2018, MK country rank is 81 out of 160)**
GO3	**To introduce green mobility and logistic focused to environmental performance of the Transport sector** *all transport modes & urban transport*	Reduce the Greenhouse transport emissions by 5% in 2025 and 7% in 2030
GO4	**Establishment of reliable and safe transport system** *all transport modes & urban transport*	Reduce of the death toll on the roads by 50% until 2030

Table 9: General objectives of the National Transport Strategy

Planned investments in the transport sector are estimated in the National Transport strategy and it cost 3703,48 million euros from 2018 to 2030.

This estimate is made according to the prepared national strategic plan of activities and the financial plan for each activity. Most of the prices are calculated according to the unit prices of the activities or relate to the estimates of the cost prices in the projects for transport infrastructure based on the calculations of financial plan for the short, mid and long-term periods as follows[42]:

42 http://www.mtc.gov.mk/media/files/%D0%9F%D1%80%D0%B5%D0%B4%D0%BB%D0%BE%D0%B3_%D0%9D%D0%B0%D1%86%D0%B8%D0%BE%D0%BD%D0%B0%D0%BB%D0%BD%D0%B0_%D0%A2%D1%80%D0%B0%D0%B-

Period	Years	Total in million euros	Million Euros per year
Short term	2018 – 2020	629, 28	209,8
Mid-term	2021 – 2025	1653,70	330,7
Long term	2026 – 2030	1420,50	284,1

There is a lack of information about the development of the strategy in terms of Gender mainstreaming during its development. The budget of the Ministry of Transport and Communications is presented without narrative how it was developed, neither there is information of the users by gender, or consultancies made with its users how it was developed etc. The budgets of Public Enterprise for Public Roads are not available online.

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http://mtc.gov.mk/media/files/2019/NTS-final%20EN.pdf

CHAPTER III

Gender patterns and gender dimension of transport behaviours

GBWN has conducted a national survey in order to obtain more relevant data concerning various factors that influence transportation. The survey has been carried out with 1100 people in N. Macedonia. Collected responses are equally distributed between women respondents (50,7%) and men respondents (49,3%) to the survey. The geographical distribution of respondents equals 29,7% of respondents coming from rural areas and 70,3 % coming from urban areas.

3.1. GENDER PATTERNS IN TRANSPORT IN MACEDONIA

Ownership and Accessibility of transport means

Men own more cars and bicycles than women. Out of the 65.3% of respondents that declare ownership of car, 59,2% are car owners are men compared to 40,8% women. People in urban areas own more cars than people in rural areas.

Men are also dominating the ownership of bicycles. 38,7% of the participants in the survey declare ownership of bicycles. Out of those who declare that own a bicycle 35,9% are women and 64,1% are men.

22,6 % of the respondents of the survey declare that they do not own car nor bicycles. 79,5% of those 22,6% are women and 20,5% are men.

Both men and women declare cars (76,5%) and Buses as most accessible types of transport. Less accessible are the e bicycles (3,5%). There are 4,5% of the people who do not have access to any of the types of transport.

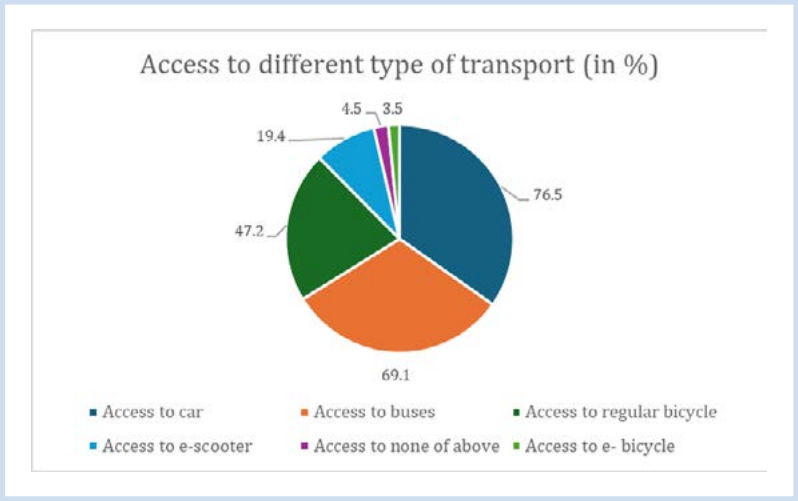


Figure 5: In case you want to use it, do you have access to (Cumulative data for both men and women)

Women choose primarily buses 70,8% while men have higher access to cars (54,63%) as means of transportation. Out of 50 respondents who declared that they don't have access to any of the mentioned types of transport, 20% are women and 30% are men.

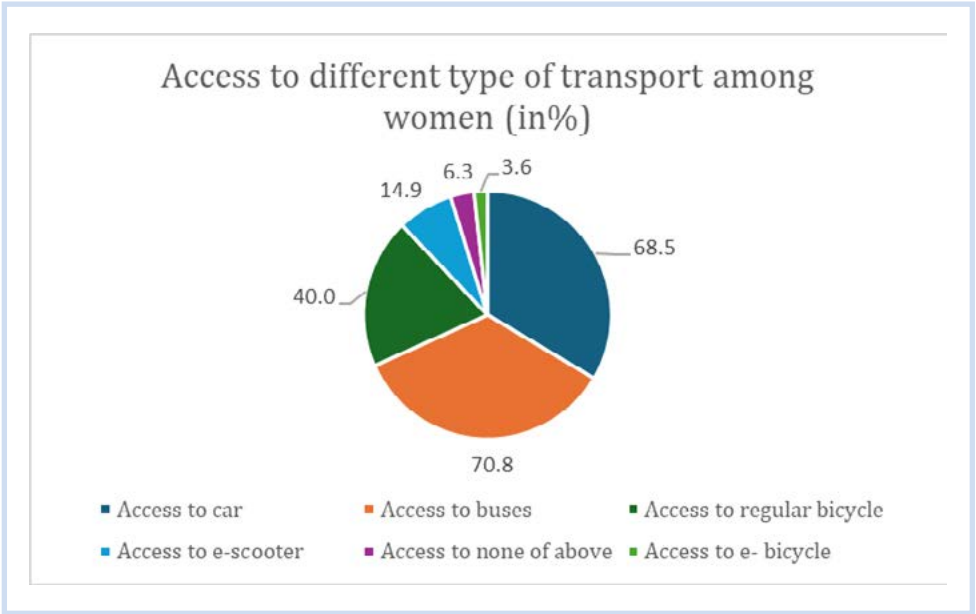


Figure 6: In case you want to use it, do you have access to (women's responses)

Affordability of transport

When it comes to the affordability of types of transport, women find cheaper transportation options, such as public buses, as more affordable; while for men affordable is more expensive transportation types such as cars, taxis, and e scooters.

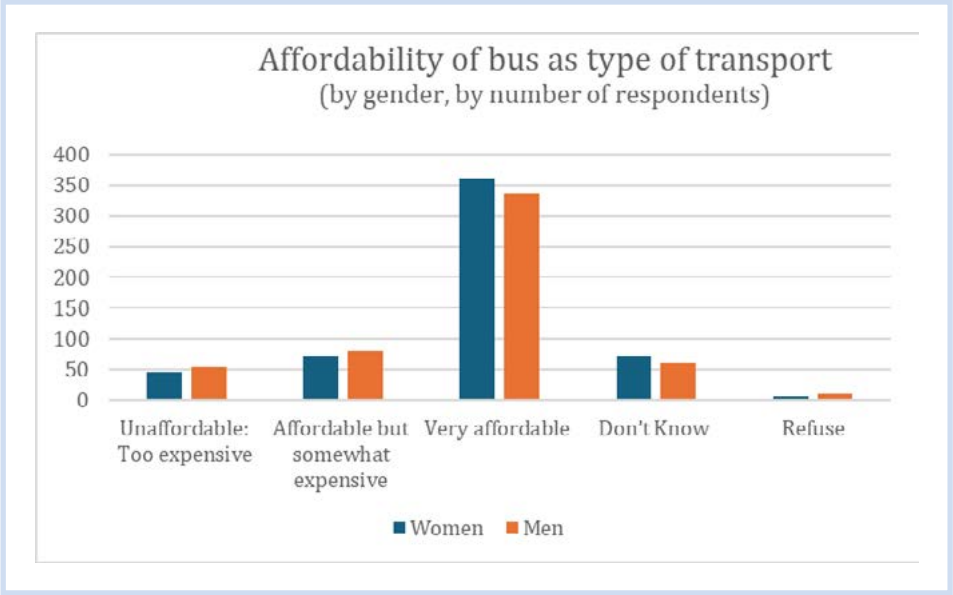


Figure 7: Affordability of bus as means of transport by gender, by number of respondents

Women compared to men find more affordable buses as type of transport. The responses show that women are more frequent bus users than men.

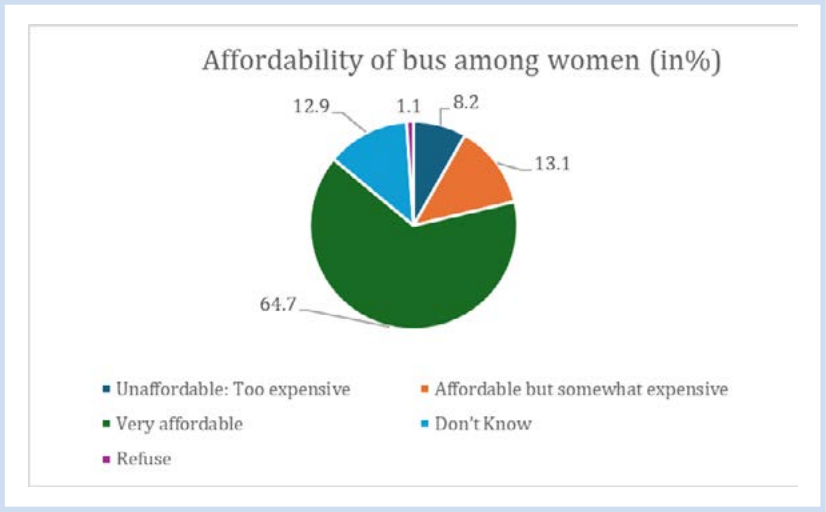


Figure 8: How affordable is type of transportation for you? – Bus (women)

Both (52,1%) men and women altogether find bicycles and skateboards as very affordable types of transport. However, when it comes to the comparison by gender women consider the bicycles and skateboards more unaffordable and too expensive or affordable but somewhat expensive than men do.

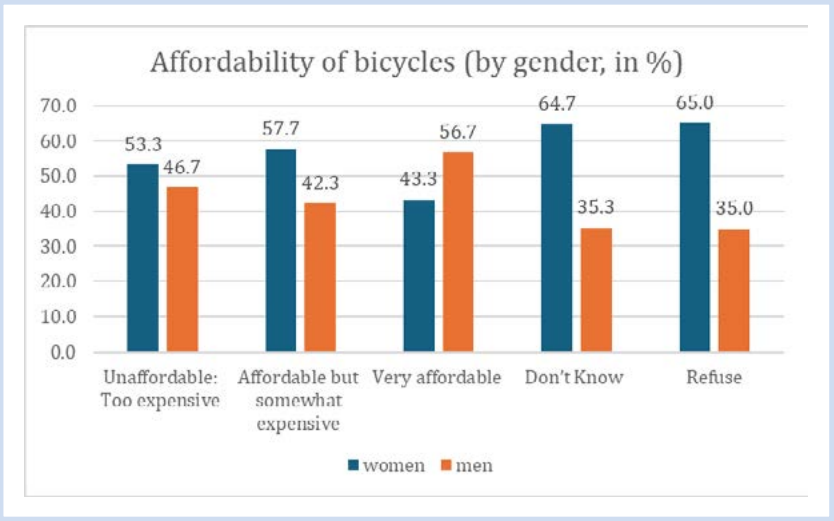


Figure 9: How affordable is this type of transportation for you? - Cycling/Skateboard (by gender)

Both men (40,6%) and women (46,4%) consider the taxi as expensive means of transport.

Men (59,2%) find car more affordable than women who consider the car as somewhat expensive (28,9%%) or unaffordable and too expensive (18,3%) type of transport

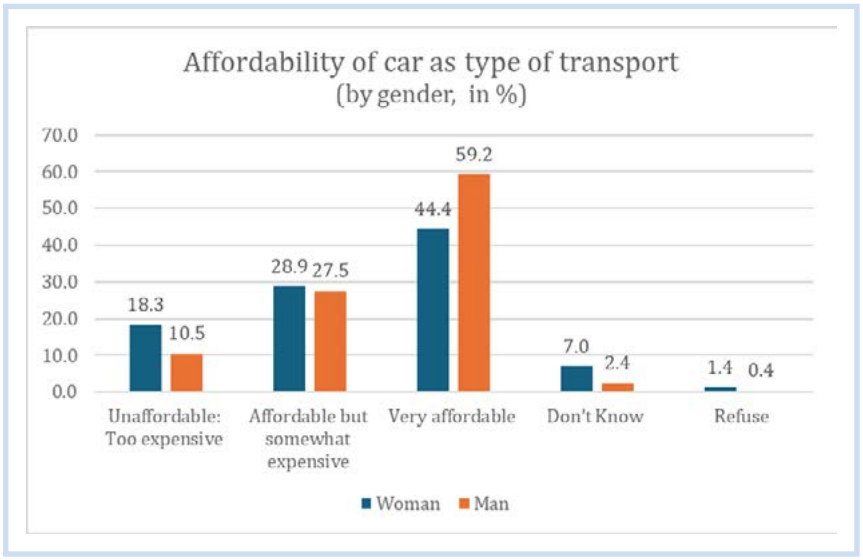


Figure 10: How affordable is type of transportation for you? – Car (by gender in %)

Frequency of using transport means

The use of the types of transport differs among men and women. 15% of the respondents in Macedonia use buses as a type of transport daily. Among these respondents 65% are women and 35% are men.

Both men and women (49,4%) tend to walk daily. Majority of women (53,2%) and majority of men (45,5%) walk every day.

Usage of bicycles and skateboards among women is low. 53,9% of women declare that they never use cycling and skateboard compared to the 2,7 % that use it every day. When it comes to men 5,5 % use bicycles every day while 33,9% never use bicycles and skateboards. In general, 44.1% of the people never use bicycles or skateboards. Out of which 62% are women and 37,9 % are men.

40,7% of the survey sample, both men and women, use cars every day. Out of those who declare that use car every day 66,3% are men. The proportion of women who declared that they rarely or never use cars, is double than men.

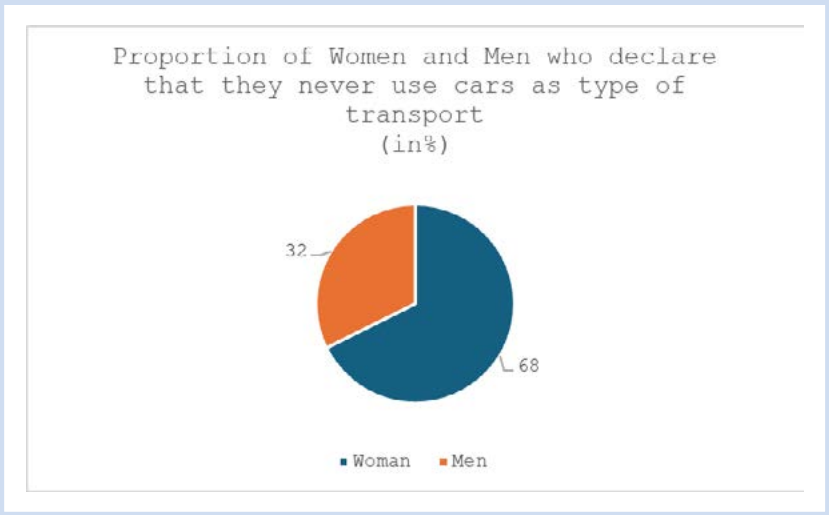


Figure 11: How often do you use this transportation? - Car (Option for selection: Never)

Taxis are rarely used as transportation types. 62% of the people in the survey declare that they rarely use taxis as transport means. The proportions of the frequency of usage of the taxis are same among women and men.

E- scooter is least used type of transport among men and women. However, the proportion of usage e- scooter between men and women Is double for men than women daily and several times a week.

Women walk most frequently. The second most frequent means of transport among female respondents is the car and the third is the bus. The least used types of transport for women are taxis, bicycles and e- scooters.

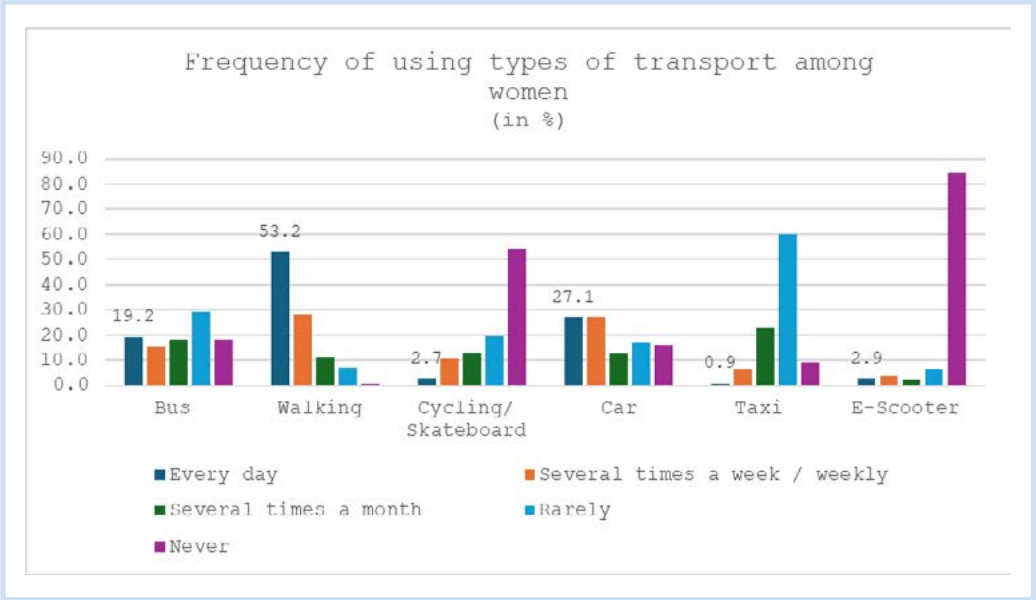


Figure12: Frequency of using different types of transport among women in %

Reasons why not using transport means

BUSES

Most responses for not using buses as a type of transport among respondents are because the service is not available. That applied for 31% of the respondents, both men and women.

Men compared to women don't like the bus transport and they also consider it slow and inconvenient. The responses among women indicate that they consider bus transport as inaccessible not wanted or slow.

Most of the rural people don't use the buses because the service is not available to them or is inaccessible (there are not bus stops nearby or where they go to) This fact reflects the situation with no accessible buses in the rural areas and dependency of the rural women on taxis and other means of transportation.

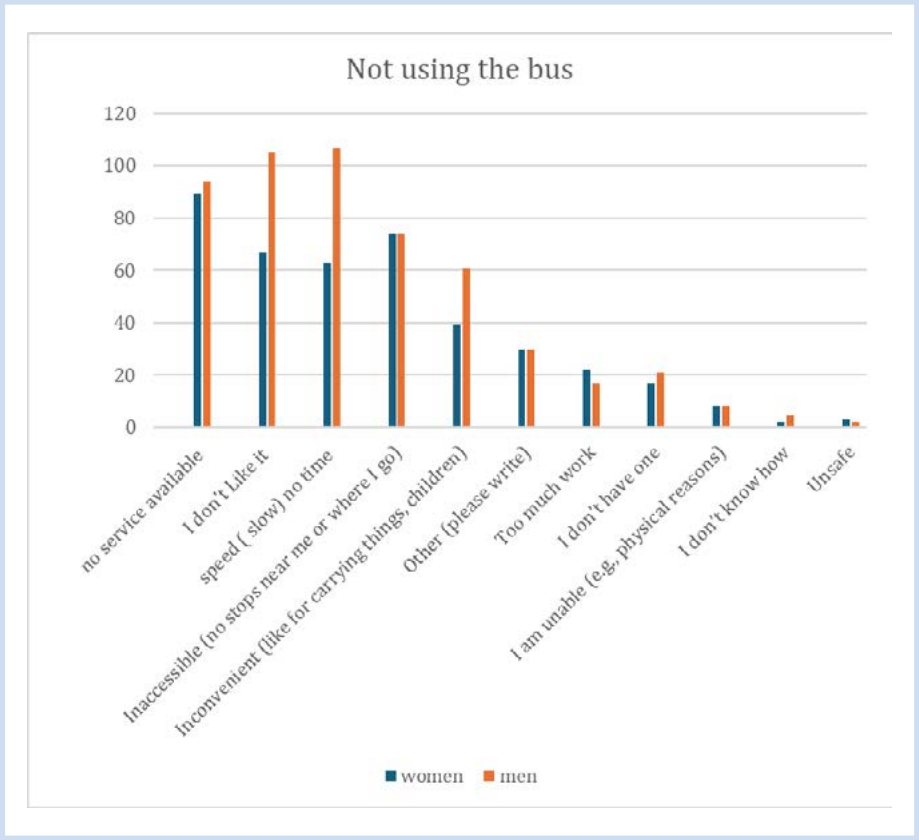


Figure 13: For what reasons are you not using bus?

On the other hand, the majority of the urban respondents don't use buses because they don't like them or because they are too slow.

WALKING

There is a low number of respondents to the question why walking is not used as a type of transport. Among those who responded the majority do not walk as they are not able (27,3%), or because they don't like it. When it comes to women majority of women don't use walking as they are unable or due to other reasons. Men don't walk because they don't like it or consider it as too slow.

CYCLING

The four major reasons why respondents do not use cycling or skateboarding as a type of transport are that they don't have one, they don't like it, are unable or unsafe. Same reasons are selected both by men and women and urban and rural people.

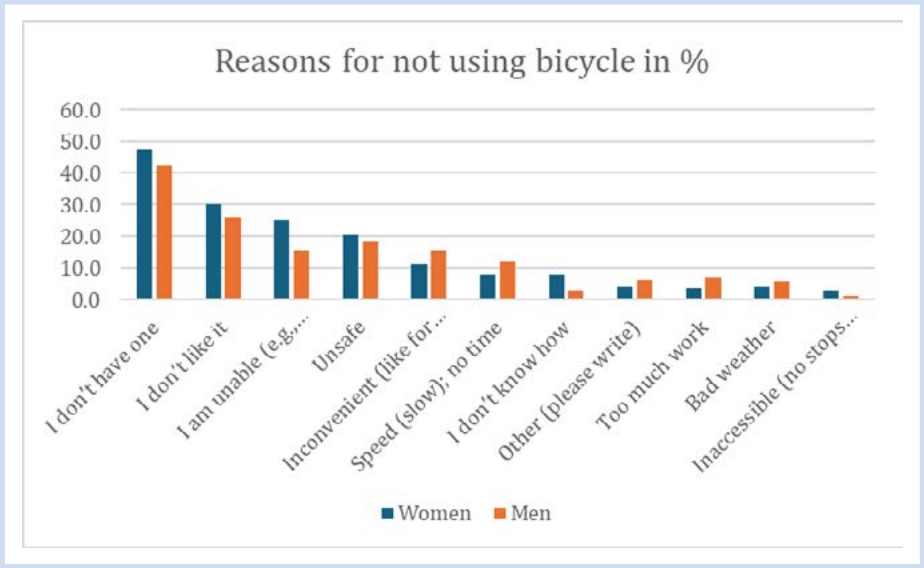


Figure 14: For what reasons you are not using the bicycle (by gender, in %)

CARS

The car is not used as type of transport among both men and women due to the following reasons: people don't have one, people don't know how to use it, for other reasons or are unable from physical reasons. The car use among women is not practiced because majority of women don't have car (74,5%) or don't know how to use it (20,7%). Men also declare that the reasons for not using car is not having one (64,8%) but the percentage of men who declare that they don't know how to use it is significantly lower (5,5%) than that of women.

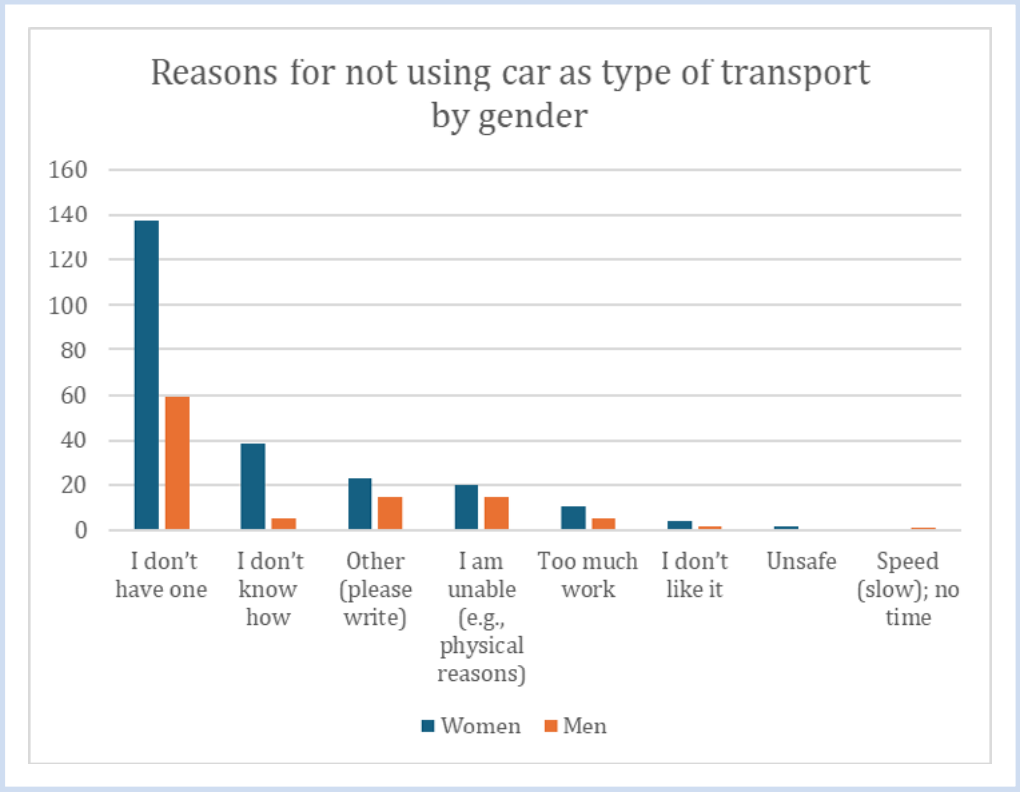


Figure 24: For what reasons you are not using the car (by gender, in numbers)

E -SCOOTERS

Five major reasons why the e scoters are not used is because people don't have ones, they don't feel safe, they don't like it and they don't know how to use it. Women do not use e scooters for same five top reasons. The situation with men differs as they don't find it convenient.

Reasons for choosing type of transportation

Factors of Influence for increased usage of buses are convenience and better connections. On the question "What would make you more likely to use the bus more often?" 46% of the respondents would use the bus if it's more convenient. Same proportion applies for both men (43%) and women (50.4%). More men declare that they never use bus (27,5%) than women do (16,3%). It's very important for women to use buses more if the bus tickets have lower costs (26,9%). Women respondents of the survey (43,9%) use bus more than men (35,3%) to access health and social services.

Walking is obviously not a priority among respondents of the survey. Only 100 respondents provided answers to the question "What would make you more likely to walk?" Women do not exactly determine factors that would make them walk more (32,6% of women responded that other is the factor that would make them walk more) if other preconditions are fulfilled. Rural respondents walk more than the urban ones and feel safer while walking. Health, Convenience and lower cost are the main factors that make both men and women walking.

Health and lower cost are main reasons why the respondents of the survey are cycling. Urban respondents use bicycles for health reasons more than the rural respondents do. The women do not use cycling as much as men, and women do not provide any factors for improvement of the conditions that would make them cycle more often. However, safer and better cycling paths and roads are second factor that would make the people cycle more often (35% of men and 26% of the women respondents selected this factor as one that would make them cycle more often).

Speed, convenience, safety and security are the three top reasons why men and women use cars.

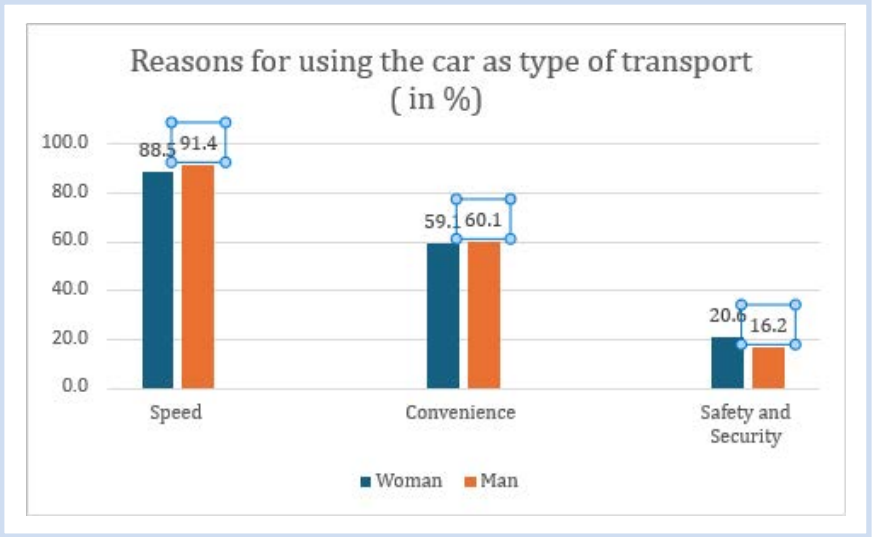


Figure 25: What are your main reasons for using car as type of transportation (by gender in %)

The number of women and urban respondents is higher than the number of men and rural respondents to the questions for usage of taxi as means of transport. This indicates that taxi is used more by women and urban respondents rather than by men and respondents in rural areas. Speed and convenience are the main reasons why the taxi is used both by men and women.

Speed, convenience, and lower cost are main reasons why both men and women use e- scooters as transportation type.

Security and safety perceptions

Safety of sidewalks for women is somewhat safe during the day for majority of women (60,4%) and not safe for 43,2% of women during the night. Men think that sidewalks are safer compared to women both during the day and during the night.

The car is safest type of transport for women as 52,4% of the respondents selected it as the very safe. After the car the very safe types of transport for the women respondents are the bus (40,5%), walking (38,3%) and taxi (30,4%).

Cycling seems to be somewhat safe option for women (68,5%). Women feel somewhat safe to use the taxi (67,3%), e scooter (66%) and bus (54 ,8%).

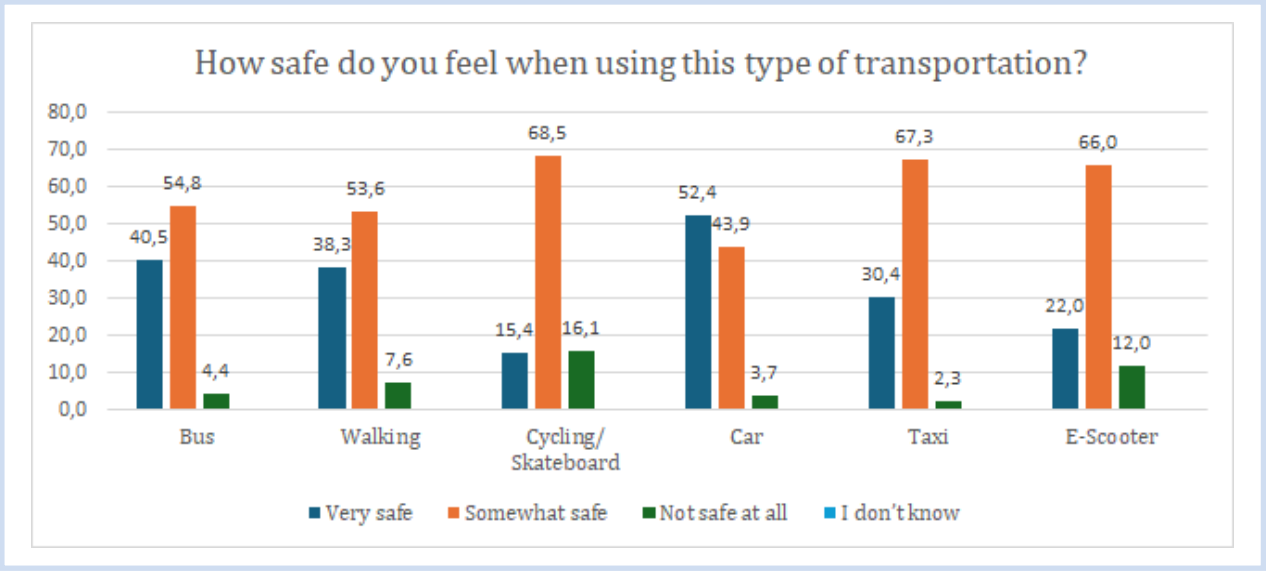


Figure 25: How safe do you feel when using this type of transportation? (For example, with lighting and sidewalks]

Women **feel unsafe** to cycle (66,1%) walk (55%), use taxi (37,5%) and bus (37,1%) during the night. They **feel safest** to use cars (79,2%), buses (55,2%) and taxis (53,9%) at any time of the day.

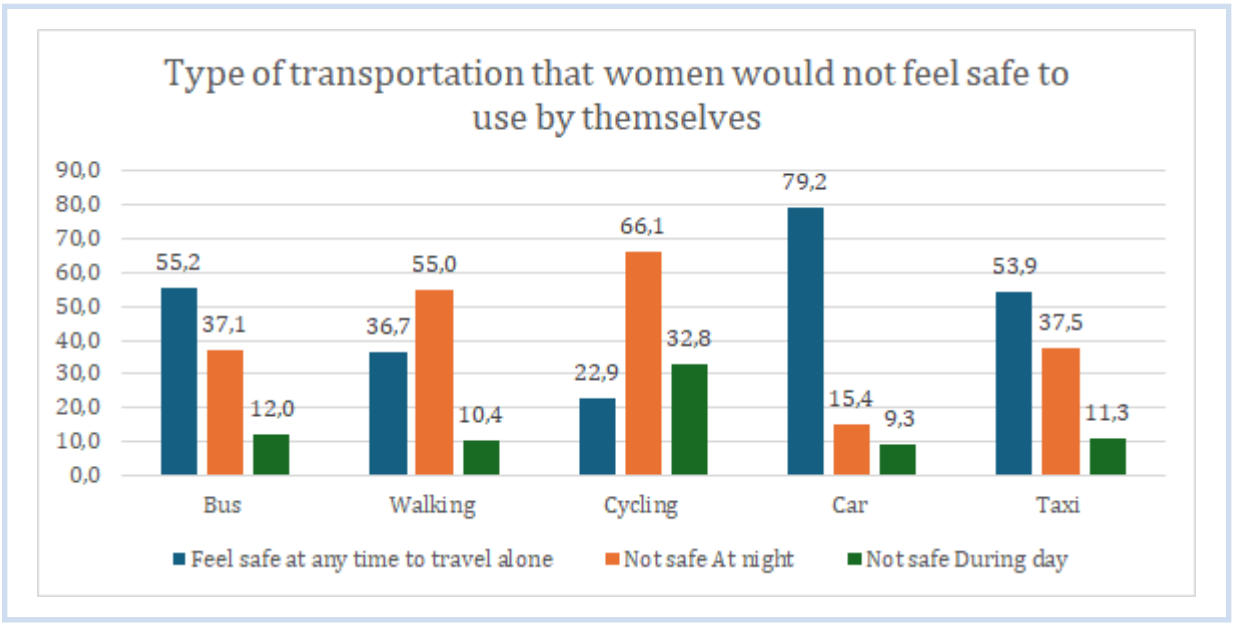


Figure 26: Is there any type of transportation that you would not feel safe to use by yourself?

3.2. GENDER PATTERNS IN ADDRESSING CLIMATE CHANGE BY CHOOSING TRANSPORT OPTIONS

Perception if climate change can be addressed by choosing transport option

Women are more aware and concerned about the climate change than men. Most (58,1%) of the women respondents have identified that cars have a lot of influence on climate change compared to men (49,6%). Most of the women (43,9%) are **concerned a lot** about the climate change, compared to men (44,5%) who responded that are **little worried** about the climate change. Both men (48,9%) and women (48,7%) respondents think that they personally can't do much but maybe something small related to their transportation choices, to address climate change. They consider that the government should address this, and not the people.

Interest in climate change friendly transport options

The sustainable transport options for women respondents that they are mostly interested to contribute to reduction of climate change are to walk and to use buses, e scooters and electric cars. Women are not so interested to use bicycles both electric and regular ones to contribute to reduction of climate change.

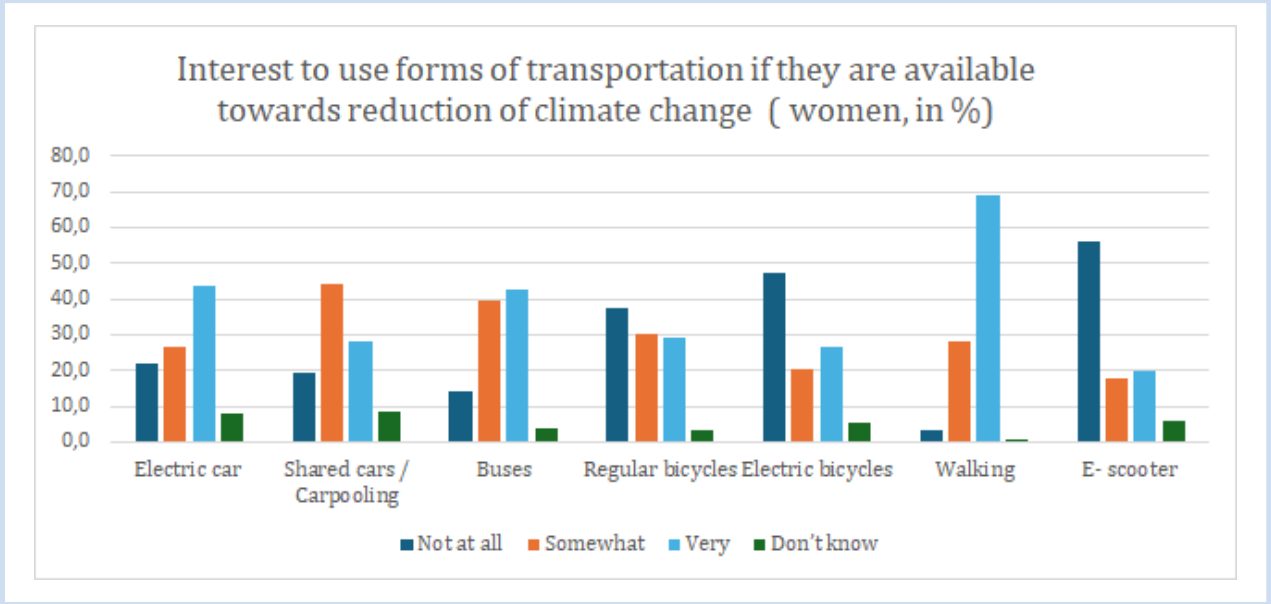


Figure 27: Towards reducing climate change, how interested are you in using any of the following forms of transportation if they were available to you? (women, in%)

Reasons for non-interest

The main reasons for not using **electric cars** are that they are unavailable and too expensive. The responses are same for women and men respondents in the survey.

When comparing men's and women's responses on interest about using a **car sharing/ carpooling man** (55,6%) are not interested to use car sharing/ carpooling due to their independence in movement. Women respondents (44%) are not interested to use it due to the security reasons, compared to 27.8% men.

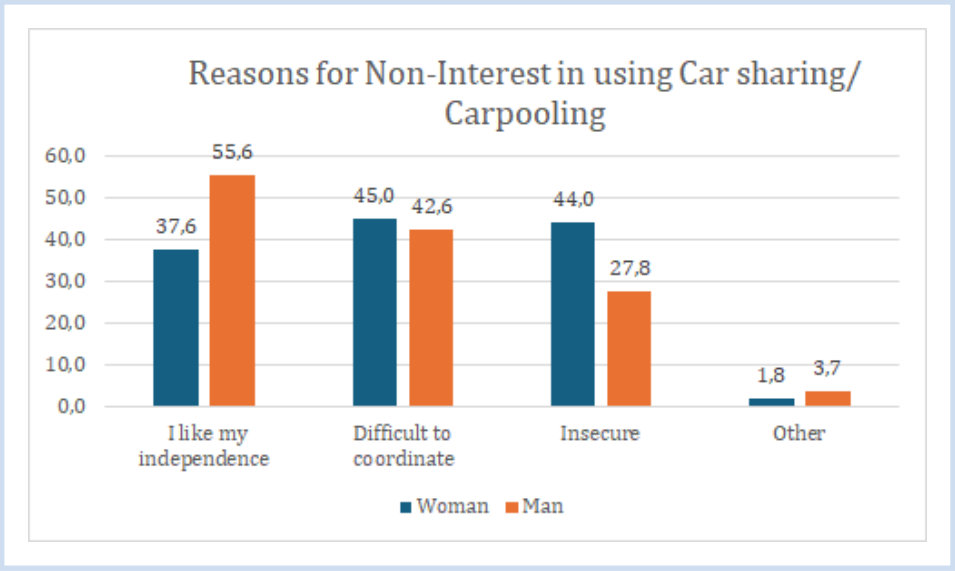


Figure 28: Main reason for not using car sharing carpooling (by gender, in %)

The reasons for not using the **buses** as sustainable transport form are identically prioritized by the men and women and include successively slowness, poor connections and lack of availability.

Bicycles are not priority in usage when it comes to sustainable transport forms because both male and female respondents don't like it and because there are not enough paths, and because it's dangerous. Men consider bicycle transport too slow compared to women.

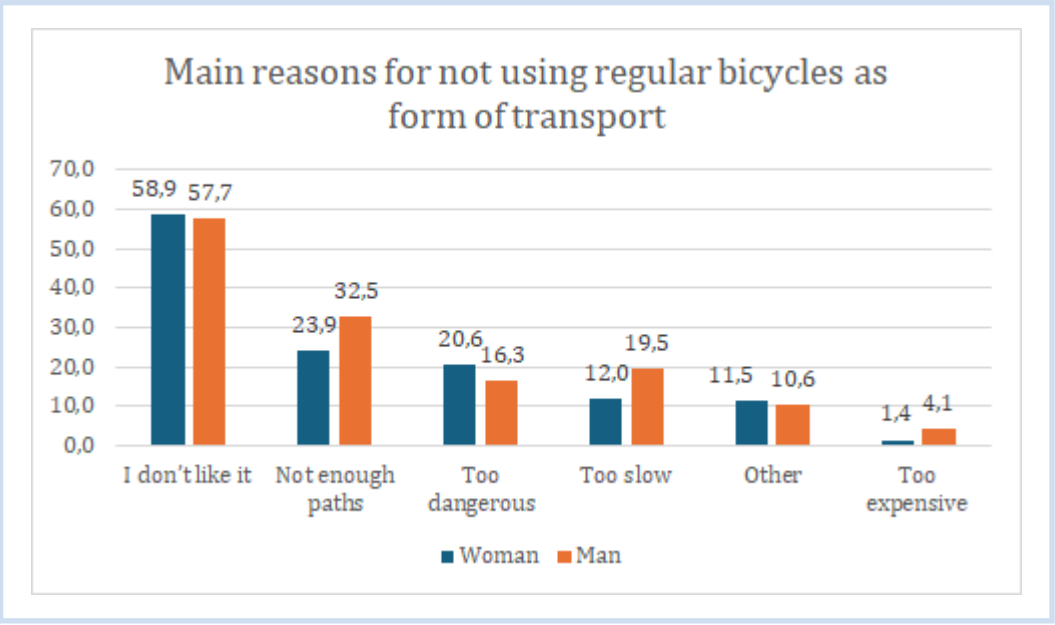


Figure 29: What's the main reason? For not using regular bicycles (by gender, in%)

Reasons for not using electric bicycles are equally distributed among women and men respondents. The main reason for not using electric bicycles is that respondents don't like it. The opinion that they are too dangerous and that there are not enough paths are the subsequent responses from the respondents.

Figure 45: Main reason for not using walking as form of transport (by gender, in %)

Main reasons for not walking by both women and men respondents of the survey is that it's too slow. When it comes to the reason that is too dangerous 23,5% of women consider it dangerous compared to the 13,6 % men.

Not liking e – scooters is the main reason why they are not used as sustainable transport form by both female and male respondents of the survey. The other reasons subsequently include reasons that it's too dangerous, that there are not enough paths or that it's too expensive..

3.3. CONCLUSION:

Men own more cars and bicycles than women. Out of 22,6 % of the people that declare that they do not own neither car nor bicycles 79,5% are women. The car use among women is lower because majority of women don't have car (74,5%) or don't know how to use it (20,7%). However, the car is still considered as safest type of transport for women. Besides cars, women respondent indicates buses (40,5%), walking (38,3%) and taxi (30,4%) as very safe type of transport. Women feel safest to use cars (79,2%), buses (55,2%) and taxis (53,9%) at any time of the day.

Women walk most frequently. The least used types of transport for women are taxis, bicycles and e- scooters. Women find sidewalks as somewhat safe during the day (60,4%) and not safe (43,2%) during the night.

Women find cheaper transportation options more affordable than men do. Buses are indicated as more affordable type of transport among women. 15% of the respondents to the survey use buses as a type of transport daily. Among these respondents 65% are women and 35% are men. The responses show also that women are more frequent bus users than men. Women use bus more to access health and social services.

Usage of bicycles and skateboards among women is low. 53,9% of women declare that they never use cycling and skateboard compared to the 2,7 % that use it every day. Women **feel unsafe** to cycle (66,1%) walk (55%), use taxi (37,5%) and bus (37,1%) during the night. Bicycles are not priority in usage when it comes to sustainable transport forms because both male and female respondents don't like it and because there are not enough paths, and because it's dangerous. The main reason for not using electric bicycles is that respondents don't like it. The opinion that they are too dangerous and that there are not enough paths are the subsequent responses from the respondents.

Women are more aware and concerned about the climate change than men. Most (43,9%) of the women are also **concerned a lot** about the climate change compared to men (44,5%) who responded that are little worried about the climate change. Women are mostly interested to walk, to use buses, e scooters and electric cars as sustainable transport options to contribute to reduction of climate change. Main reasons for not using electric cars as a sustainable means of transportation are that they are unavailable and too expensive.

CHAPTER IV

Lessons learned from local practices

The local practices in N. Macedonia were determined based on the previous knowledge and popularity of the available climate friendly practices in two cities. The cities that were taken into account are the capital of the country City of Skopje which had policy and strategy named Skopje velo city. The other town is Ohrid, which is a well-known summer touristic center and absorbs more people, mainly tourists using the existing transportation infrastructure adding to the climate footprint from the transportation in the area. The most dominant factor was also the long-term tradition of cycling in the town. Both City of Skopje and Ohrid have their positive and negative aspects in the public transport and cycling/ scooters/ accessibility infrastructure. The cases are presented below.

4.1. A REVIEW OF THE MEASURES TAKEN IN TRANSPORT AREA IN THE LAST 5 YEARS THAT HAVE POSITIVE ENVIRONMENTAL / CLIMATE CHANGE IMPACT

Case Study Ohrid

Municipality Ohrid is based in the Southwest region of the country. It's a Municipality that is also under protection from UNESCO due to the specific cultural and natural values. Within the municipal responsibilities are those related to transportation in the municipality. More concretely the responsibilities are within the sector for communal works and traffic. The municipality has **public transport organized by two companies as transportation providers.** Public transport has a system for inter and intracity transport. The vehicles include buses, vans, and minivans. Each line is covered by the two transport providers. The schedule of the lines is set by the municipality, and the transportation providers do follow the set schedule. The bus schedule is set according to the

needs of citizens and their mobility patterns. The transport starts at 5:00 in the morning and ends at 23:00 in the evening.

One of the measures for greener local transport and responding to the demands of passengers is the increased number of buses and vans during the summertime. This is due to the increased number of passengers and the tourist season. The lines include buses that run every 10 minutes on the coast of the lake. The number of passengers on these lines during the summer season has significantly increased. Public transport was used more prior to the COVID-19 crisis. After the pandemic, the usage of public transport decreased drastically. The municipality responds to the demands from citizens for the introduction of additional and new lines. There are lines that are not economically viable to be ongoing due to the low number of passengers and the need for them. The second measure to respond to citizens' needs and to provide constant and regular public transport is that the town subsidizes the transportation providers per km to keep some of the lines that are not profitable for the transportation companies.

The sector is also organizing transport for students that is functioning regularly. That is one of the responsibilities of the municipality according to the law.

Taxi transportation is also regulated by the municipality sector along with the traffic inspectorate. Lightning in the municipality is secured in the public spaces and streets. The subsidies offered for transport include subsidies for purchase of bike and support up to 6000MKD or 100 EUR for purchased bike which is delivered on the basis "*first come first served*". Regarding the bicycle lanes, the municipality is trying to improve the bicycle network infrastructure in the city and outside of the city bearing in mind the limited possibilities for implementation of the bicycle lanes in the current infrastructure. The network of bicycle lanes is 23 km throughout the city, and it needs further expansion. The investment in the network so far is 749.186 Euros.

The plan of the municipality is to build bicycle lane that will connect Ohrid and Struga for sports biking with tendency to continue to Albania. There are also plans for building new lanes, but new projects are required. One of the projects for transportation includes green transport in Ohrid offering public bike sharing and provision of e-vans that are supposed to prevent car driving in the Old city. The planned investment in this project is 700.000 Euros. Funds are to be obtained from the project EU for Municipalities funded by the European Union. The idea of the project is to prevent car use in the old town both for residents and for the public. The e- cars and e – vans will provide free public transport in the old city area for the residents and visitors with a regulated time schedule.

Viewed from the perspective of the users of the bike lanes on the territory of Ohrid same as municipality there is a need for further improvement of the bicycle network within the city but there is a special attention needed for improvement of the bicycle connections outside the city especially on the local roads that are by the lake so they can be utilized better by the citizens and the tourists. When it comes to facilities linked to electric vehicles Ohrid has one charging station in the city center and there are other charging stations at the Hotels.

Case study Skopje

The transportation in the city of Skopje is a responsibility that is shared among three sectors within the city administration (sector for traffic, urban planning, and environmental protection), two public companies and the municipalities within the City of Skopje.

Planning the construction and reconstruction of the main streets and boulevards in the City of Skopje is the responsibility of the **Urban Planning Sector**. The sector leads the processes of construction and reconstruction of the major streets and boulevards, bridges, and two parks Gazi Baba and Vodno on the territory of the city. There is inter-sectoral cooperation with the sector for environmental protection regarding the projects linked to the environmental protection of the city and traffic interventions in protected areas on the territory of the city.

The sector for traffic in Skopje is responsible for development of plans for the sustainable urban mobility in the City of Skopje, determination of the conditions and regime of traffic in the City of Skopje, traffic safety and technical regulation of the traffic, monitoring and control of the public transport. In addition, its responsibilities include securing implementation of the legal framework linked to the monitoring and control of public transport. It oversees the arrangement and organization of the public city transport in the city and its suburban and rural areas, and taxi transport, parking arrangement and its usage. The sector is also in charge for coordination of the transport and traffic issues with the rest of the responsible institutions, tracking of the public transport vehicles, controls and of the transportation routes and follows the work of the public transportation company JSP Skopje and public parking management company *JP Gradski Parkin*g. The sector plays a major role in the resolution of the problems linked to traffic and urban logistics.

The **Environmental Protection Sector** is working on protection, measures and prevention from air pollution, pollution of water, soil, protection of organic and non-organic chemical technology over the environment. Protection of nature and greenery, protection from noise and ionic emissions, adaptation and mitigation of climate change, strategic planning of environmental protection through preparation of strategic, planning and project documents and follow up of their implementation at the territory of City of Skopje, secures work of the departments and coordinates its work with other sectors in the administration of the City.

There are two public Companies, Public Traffic Company Skopje (JSP Skopje) and Public Enterprise Streets and Roads Skopje, and the Association of Private Transporters that are directly involved in public transport in the City of Skopje. Public Enterprise streets and roads Skopje is responsible for construction and maintenance of the major streets and boulevards which are the responsibility of the City of Skopje. (Local streets and roads in the municipalities in the City of Skopje are the responsibility of the municipalities). JSP Skopje is responsible for organisation and delivery of public transportation services to the citizens along with the Association of Private Transporters.

There are 110km of connected bike lanes in the City of Skopje. The bike lanes are regularly maintained by the Sector for Urban Planning but the situation on the ground is not very well due to the bad traffic culture which results in parked vehicles on the lanes, broken traffic dividers on the streets, etc. The **Sector for Traffic** was developing the rulebook for development of the biking in the city. The rulebook has not yet been adopted. The same rulebook has been revised and presented as a proposal by the NGO Go Green at a conference along with representatives from the Municipality Centar and the City Skopje.

The city delivers subsidies for purchasing bicycles also on the principle of "*first come first served*", since 2017. The sector for Environmental Protection does not provide concrete information on the amount spent on subsidies for bicycles, as the amounts differ and the scheme for deliveries has been changed through the years. In some years the subsidies were delivered as an absolute amount and in some years as 50% of the value of the bicycles bought. The approximate absolute amounts that were given were from 3000-4000MKD. There have been approx. 19200 citizens as beneficiaries since 2017. The total amount for subsidies for bicycles in 2024 was 2.800.000,00MKD[43] The City of Skopje has also delivered subsidies for electric scooters in amounts of 6000-7000 MKD for approx.1800 citizens.

The sector for social issues has been also delivering subsidies to vulnerable groups

There is a need for revision of the approach to provide access to the vulnerable groups of citizens including also women.

Traffic improvement is part of the plan for investments in new boulevards and streets in the city including access to the new highway Skopje Blace and the new bridge near Vardar on the east side of the city. The bike lanes are made according to the urban planning development plans. The city invests in construction of bike lanes on major streets and boulevards and adaptation of the sidewalks and streets and boulevards to accommodate bike lanes. However, the whole street network is not the responsibility of the city and therefore municipalities must integrate bike lanes in the planning on the level of municipalities. There is a low level of cooperation with the urban planning departments of the municipalities which are in the territory of the city regarding the common interventions on the streets and boulevards and transport related infrastructure. There is information that Karposh and Centar implement most of the projects related to transport related infrastructure.

Traffic safety is a major responsibility of the transportation and traffic sectors. The sector works with the Law for public roads, Traffic Law, Law for urban planning and the relevant bylaws. There is a new strategy for traffic safety 2050 which is in a process of development which has vision of 0 traffic accidents and traffic safety. The traffic sector has made proposals for changes in the legal framework for safety which have been adopted.

PUBLIC TRANSPORT

The public transport in City and the surrounding areas is organized through the public transportation Company "JSP Skopje"[44] and Association of Private Transporters. There are 120 private transporters that cover the public transport. There are 400 buses needed daily to fulfill the requirements of the city for fluid transportation in the city. There have been purchased 38 new buses in 2018. The public transportation had a project with funding of 700mil euro Bus Rapid Transport which is yet not adopted by the council of the City. The project would decrease usage of cars in the city by 30-40% in the first year and 5% to 6% in every consecutive year. [45] There are subsidies for transport which are provided by the city for students, persons older than 62 years, and children with disabilities. The transport and traffic sector have 1 billion Macedonian Denars or 16 mil Euros, out of which 90 % is for subsidizing the public transportation company "JSP Skopje"[46].

43 subvencii-velosipedi-2024.pdf

44 JSP Skopje has been contacted several times for interview but has not responded. During the time of production of this report there have been general crises in the company due to depts and interruptions of the public transport services in the City. The situation with the public transport was bad. ВТОР ДЕН СКОПЈЕ Е БЕЗ ЈАВЕН ПРЕВОЗ, НЕ МОЖЕ ДА СЕ СТИГНЕ НА РАБОТА И ВО УЧИЛИШТЕ - Сакам Да Кажам

45 Interview with the traffic sector of City Skopje

46 ibid

Climate change effects on the transport and traffic in City Skopje is regulated through the centralized and automated system for traffic lights that enables smooth running of the traffic and contribution to reduction of greenhouse emissions.

The measures for flooding include interventions on the main streets and boulevards. The city also controls the riverbanks of the river Vardar and therefore secures mobility on the riverbanks by bikes and walkers. The eventual disasters are managed together with the Center for Crises management for the City of Skopje. Transportation participates in pollution in the city with 19 % of the total % of PM particles. The newest buses of the JSP Skopje produce less CO2 emissions.

4.2. ASSESSMENT OF THE GENDER-RESPONSIVENESS OF THE LOCAL MEASURES/ POLICIES AND BUDGETS IN THE LAST 5 YEARS IN TRANSPORT AREA THAT HAVE POSITIVE ENVIRONMENTAL / CLIMATE CHANGE IMPACT, USING THE TRAFFIC LIGHTS METHOD OF ANALYSIS

The gender responsiveness of the policies in the last five years is that the City of Skopje has paid more attention than Ohrid in establishing and making functional the gender budgeting process. Although Ohrid has developed its gender strategy that included transportation linked measures and actions, the implementation of the same has been on a very limited level. Thats due to the lack of capacities dedicated to the gender issues in the municipality.

Case Study Ohrid

There is specific attention in lightning at the bus stops. That would make municipality more responsible in line with the safety and security while using the public transport. There are no other specific activities undertaken to provide accessibility to private and public bus operators to provide more for women and elderly.

he subsidies offered for transport include subsidies for purchase of bike and support up to 6000MKD or 100 EUR for purchased bike which is delivered on the basis first come first served. This scheme does not include specific criteria related to the socioeconomic status of the people that receive the subsidies, and there is a need for a change of scheme. The subsidies for purchasing of bikes is part of the Action plan of the strategy for gender equality, but it's not implemented in a way to meet the needs of the women and socially excluded groups of citizens. Regarding low-income citizens there are other subsidies' schemes that support low-income women, but the current scheme does not include specific support regarding transport services. The municipality hasn't provided information on how many citizens have been beneficiaries of the subsidy scheme so far.

The bicycle lanes are equally used and utilized by men and women. The municipal administration claims that the women in Ohrid cycle more than women do in other towns in the country and that Ohrid's women have tradition in using bicycles. There is no data and gender disaggregated data available for usage of the bike lanes, or women using bicycles. The municipality also does not have evidence of the numbers of passengers on public transport, nor transport statistics for the sector in general. There is no available sex disaggregated data concerning the public transportation.

The Action plan that is part of the available Strategy for gender equality (latest is for 2020/22) in the Municipality identify activities in the Programme for communal development such as Lightning of all pedestrian paths, subsidies for purchasing bikes, Pink taxi lines (with women drives after 22h), reserved parking spots for women in the city parking spots, affirmative measures for employment of the parking controllers – women. The actions from the strategy are not yet implemented in the municipality apart from the lightening of the pedestrian paths. The coordinator for equal opportunities mentioned that the strategy is revoted every year and that the municipality allocates budget for its implementation. Due to the lack of capacities and initiative for implementation the funds are than again reallocated in other budget lines. The problem is with the lack of capacities for implementation of the action plan and its coordination with the sectors. When it comes to the functioning of the **Coordinator for Equal Opportunities**, the person nominated has other work position and it's difficult to handle all responsibilities that coordination work requires. Despite all that the person works in line with the Commission at the Council and his/her development programmes that are usually part of the annual budgets of municipalities. The programs so far have not included any activities linked to the transport. Also, during preparation of the traffic and transport related strategies and documents there is a lack of coordination and consultation process between the Sector for Traffic, Communal Work/Services and the Coordinator for Equal Opportunities. Same applies for other sectors and the role of the coordinator is perceived only for activities that are strictly women centered. There is an identified need for development of a new feasibility study that would take into consideration the economic aspects but also the social aspects of public transportation in the city.

Case study Skopje

The lightning that city covers includes areas on main streets and boulevards. Through implementation of smart street lightning system and the platform for digital city, priority is given to securing of safety for citizens and energy efficiency in public lightning system. The total budget for 2024 for this purpose in City of Skopje was 93.000.000,00 MKD. The lightning includes lightning at the bus stops. Three sectors in the city develop their budget programs, and they are obliged to integrate the sentence that "the programs are to be implemented in line with the principles of the Strategy for gender equality of City Skopje 2021-2025 which there is foreseen implementation of gender approach during planning and delivery of all public services" from the respective areas of work.

Sectors for urban planning and traffic are collecting data about number of passengers and traffic, but the data is not gender disaggregated. The sectors do not particularly work on gender mainstreamed planning, but they follow the current legal framework and the regulations for urban planning and traffic, which are gender neutral.

Traffic Sector and the City of Skopje organized public hearings for major transportation projects to include public opinion and secure different perspectives into the planning processes. Major studies are proceeded with public consultation and hearings. However, there is no specific attention given to securing gender equal participation during the consultation processes on a local level. The data collected is not gender disaggregated.

Regarding the inclusion of persons with disabilities in the planning of transport, the sector for urban planning follows the legal framework and regulations for planning and construction. So far, they have integrated ramps in the high schools and secured that 90% of the sidewalks that are part of the streets and boulevards in their responsibility are made accessible. The city also integrated tactile strips on some sidewalks and in the parks. The traffic sector claims that public buses in the city are equipped with facilities for people with disabilities. During purchase the producers sell standardized buses which have integrated facilities such as the possibility for lowering the buses, accessibility ramps, audio and visual information for the trip. The perspective of the persons with disabilities on the matter is different (See section 4.3)

The subsidies scheme of the city includes free public transportation for children with disabilities.

Skopje has a Strategy for gender equality 2021-2025. The action plan, which is part of the strategy, foresees implementation of short- and long-term activities through annual operational programs. The strategy anticipates integration of gender approach in planning and delivery of all public services including accessibility of public transport and transport lines. The City of Skopje prepared and published its' Report for the progress of the situation of equal opportubities among men and women for 2023. The report indicates progress and effective implementation of the process of programing and Gender responsive budgeting of the City Skopje. However, during the interviews the sectors were not fully aware what are the gender aspects of their programs and how they affected the sectoral programming of the budgets.

The City of Skopje had a Coordinator for Equal Opportunities who was appointed and communicated gender issues to the three sectors in the process of the planning and development of the Gender Strategy. Since the coordinator has left the job and there has not been a replacement, **the activities around gender issues stopped**. This has reflected this transport research as the input regarding gender equality perspectives from the coordinator's work is missing. Under these

circumstances it was difficult to obtain more information about the gender mainstreaming and functioning of gender coordinative bodies in City Skopje.

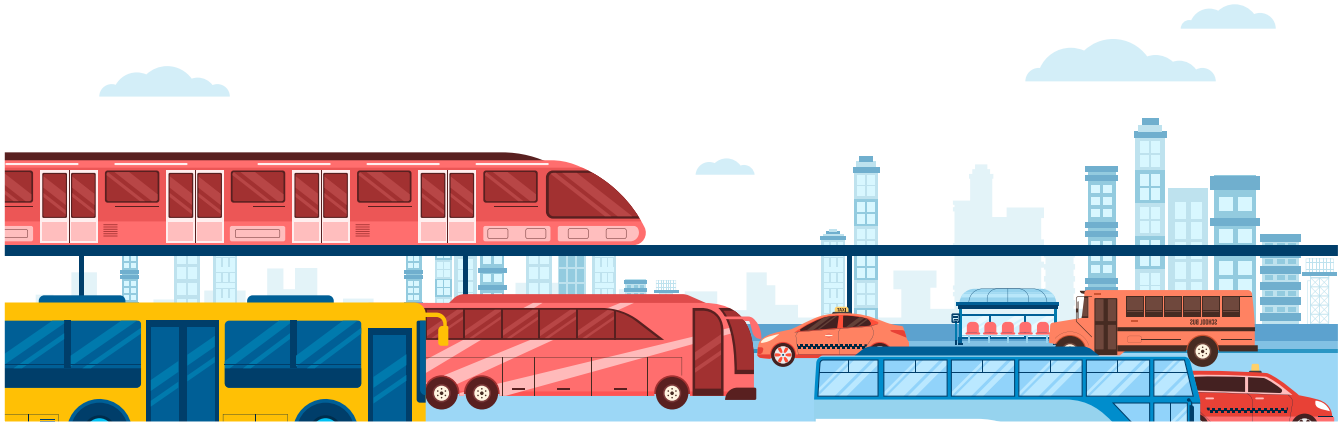
City of Skopje is led by a woman, as elected mayor. The city council[47] is constituted of 45 members and a President. The President of the Council is a man. There are 21 women and 24 men sitting in the council.

The city administration has 20 sectors. They are led in a way that 14 heads of sectors are women and 6 are men. The decision making on executive level is led by women while the decision making in the council is almost balanced.

The sector for urban planning employs 44 persons out of which 16 are men and 28 are women. The sector for traffic is more balanced and employes 7 women and 8 men. Both sectors are managed by woman as head of sector. The environmental sector is dominated by women. The leadership positions in the sector for protection of environment are shared between 4 women and 1 man. Head of sector for environmental protection is woman.

Public Bus Company "JSP Skopje" managerial positions are held by men. Management of JSP Skopje is men dominated. Both the general manager and and operational manager are men. There are 2 women on positions heads of sectors and 7 men on positions heads of sectors. Men dominated is the management boards which is constituted of 11 men and 1 woman. The steering board is constituted of 3 women including the president of the board and 2 men[48].

The decision making in the Public Enterprise Streets and Roads Skopje is made within the Management board. It is constituted of 12 members out of which 5 are women and 7 are men. The steering board is constituted of 5 members out of which only 1 is a woman and the rest 4 are men. The public enterprise streets and roads Skopje is men dominated in its decision making[49]. The executive management of the enterprise is led by a director who is man and there are six sectors which are managed in a balanced way, three sectors are led by men and three sectors are led by women.



47 https://skopje.gov.mk/mk/skopje/sovet/

48 http://jsp.com.mk/jspinside.aspx?page=3

49 https://uip.gov.mk/upraven-i-nadzoren-odbor/

INTERVIEWS WITH USERS OF THE PUBLIC TRANSPORT SERVICES

CRPM undertook interviews with 24 persons users of the public transportation in City of Skopje. The interviews were carried out in October and November 2024. There were 15 women and 9 men participants of the survey. Predominant respondents of the interview are young persons (11), middle age (9) and elder women (4). Most of the respondents responded that they use public transport daily 66,7%. 16,67% use it a few times per week. Most of the usage of public transport among interviewed users is to commute to work (62.5%), to commute to school and child' school (16.7%), to access state services (16.7%). **Most respondents (54,7%) use public transport because they don't have a car, the rest use it because it's convenient (33.3%), and its inexpensive (12.7%).** There is low environmental concern among the interviewed people as only 4.17% use buses because it is better for the environment than cars.

Satisfaction with the bus routes is low as 58.33% of the interviewees are not satisfied and 33.3% are somewhat satisfied. Satisfaction with the bus services during peak hours is also low as most of the respondents (37,5%) are dissatisfied with the bus services, and 33.3 % are very dissatisfied with the bus services. The rest of the interviewees are satisfied (12.5%). The bus timetable is mostly taken from the application of the public transport company, but it is considered unreliable. The interviewees find that buses are overcrowded (83.33%).

Regarding safety, interviewed persons think that buses are safe, and they feel comfortable using the buses after 10pm. 70.83% haven't witnessed any discomfort on the buses while 16.67% have experienced or witnessed discomfort, (12.5%) felt harassment. There are 91.6% of interviewees that say they never witnessed or experienced any sexual harassment while using the bus services.

Most interviewees (75%) claim that the buses do not adequately accommodate parents with strollers, and that the bus service adequately accommodates people with disabilities. There are 25% of the interviewed who noticed that the bus driver or staff treated women and men differently, while 75% haven't noticed.

4.4 TRANSPORT INFRASTRUCTURE AND THE RESPONSIVENESS TOWARDS THE NEEDS OF PERSONS WITH DISABILITIES (CURBS SLOPED, SMOOTH, TACTILE STRIPES, SOUND-BASED TRAFFIC LIGHTS)

CRPM also has conducted a focus group with four women with disabilities (one with visual impairment and three with physical disability) about the transport. The women presented their concerns and realities in terms of using inter and intracity public transport, as well and the different modes of transport.

Legal and Policy Framework

The findings from the focus group clearly show that the transportation is not accessible for persons with disabilities, and it's less accessible from a gender equality point of view. Further there is a significant misalignment between the national regulatory framework on transport and the standards set by the United Nations Convention on the Rights of Persons with Disabilities (CRPD). Although some positive legal provisions exist, their implementation is severely lacking. Persons with disabilities remain structurally excluded from the public transportation system due to this legislative gap and the lack of enforcement of existing laws.

Public Transport Accessibility: Urban and Local

In urban areas such as Skopje, accessibility remains problematic despite the presence of certain facilities. Buses often feature ramps and designated spaces for persons with disabilities; however, these are frequently non-functional. Bus drivers often claim mechanical issues to avoid deploying the ramps, even when they are operable. The infrastructure at bus stops is similarly inadequate, with high pavements situated far from stopping points, hindering boarding for wheelchair users.

Additionally, buses lack clear visual and audio information, posing challenges for passengers with visual impairments. Sound systems are often turned off by drivers, who argue they disturb other passengers, and visual displays are frequently replaced with commercial advertisements. The use of white canes by individuals with visual impairments is rendered ineffective due to poorly maintained or obstructed sidewalks.

Inside the buses, spaces allocated for persons with disabilities are often occupied by other passengers, who frequently do not yield their seats. Overcrowding exacerbates these issues, making it difficult for individuals with disabilities to get on or get off the buses safely. There is particular difficulty for persons with visual impairments to get through the public transport as the sound information related to the trip is off, there are screens with commercials inside and commercials outside the buses that prevent the visibility about what is the number of the bus, where it's going, and what is the next stop of the bus. Discriminatory behavior from drivers and fellow passengers is also a reported concern.

Regarding accessibility of the public transport in Ohrid, the transportation companies should have ramps for access of persons with disabilities which in the current provision of the public transport is not the case. The same applies to the road and street infrastructure where there is a need for further investments in the sidewalks to be accessible for all including persons with disabilities and strollers as well as for people with visual and hearing impairments.

JSP Skopje provides a specialized van service for persons with disabilities, which requires advance registration—typically five days ahead. While these vehicles are technically adapted for wheelchair

access, the system is inefficient and lacks sufficient user outreach. Despite these limitations, there remains interest from the community in using the service, highlighting the unmet demand for accessible transport solutions. Moreover, although free public transport tickets are offered to persons with disabilities, poor system conditions severely limit their usability. JSP Skopje provides free tickets for people with disabilities, but they can't be utilized due to bad conditions on public transportation. People with disabilities cannot move independently at public transport sites such as bus stops, in the buses, which limit their independence of movement. However, Skopje compared to other cities and towns in the country, offers better transport possibilities.

Intercity travel presents even greater challenges. Individuals with disabilities often depend on others for transport due to the lack of accessible services. Although driving is an option for some, the infrastructure does not support their autonomy. For example, accessible driving lessons are available only in Skopje, creating geographic and economic barriers for individuals residing elsewhere. Furthermore, high costs related to fuel, registration, and maintenance impose additional financial constraints. Marked parking spaces for persons with disabilities are frequently occupied by other drivers in violation of the law, and enforcement remains weak. These issues further restrict the mobility and independence of individuals with disabilities.

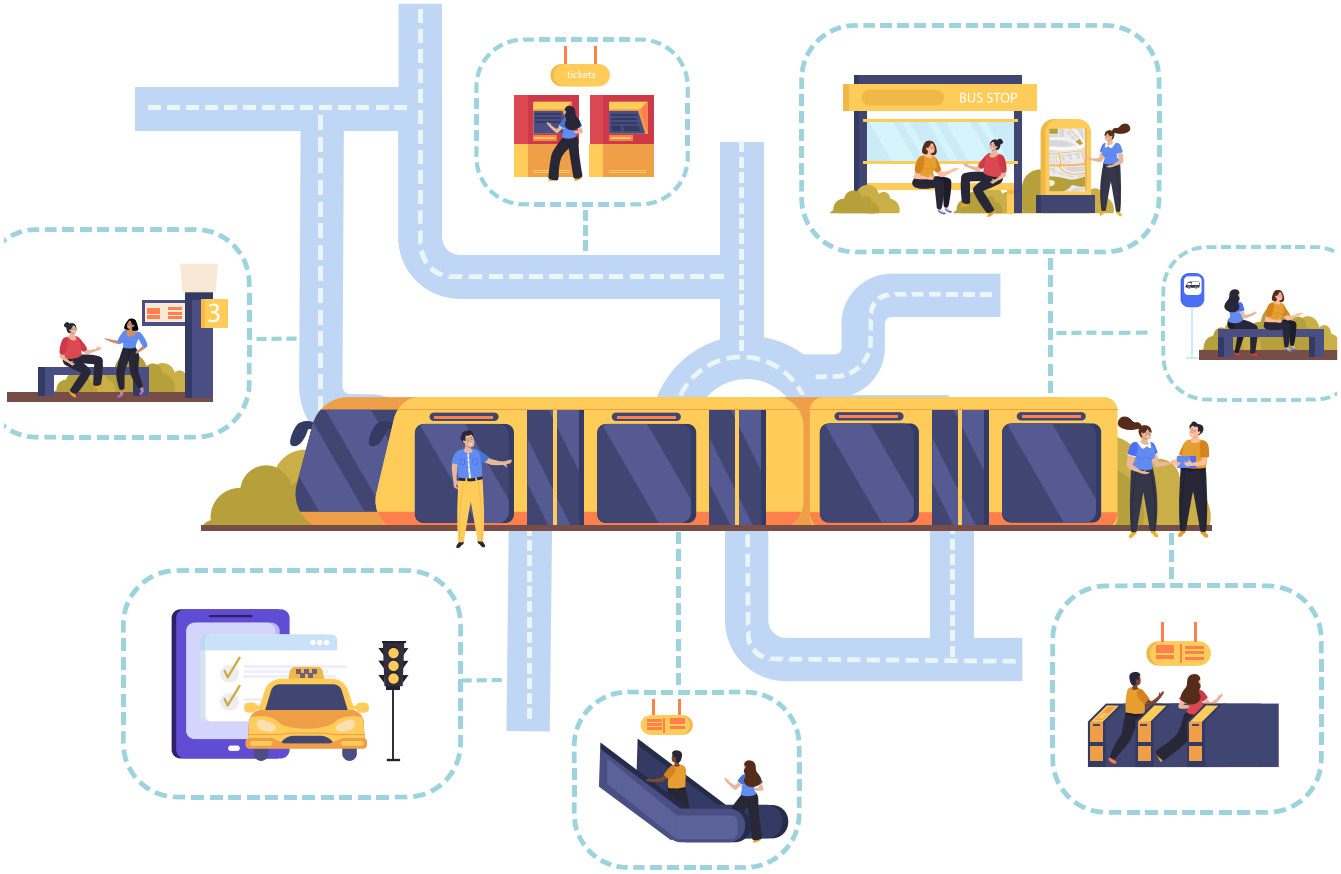
Gender-Specific Impacts

The intersection of gender and disability compounds the challenges faced by women with disabilities. Women with disabilities are rarely included in consultation processes related to urban planning, resulting in designs that do not account for their mobility requirements. The lack of accessible public transport directly impacts their ability to access essential health and social services. Persons with disabilities and women have faced physical injuries due to the bad transport infrastructure. Especially while getting on or getting off the buses. Due to the bad traffic culture and the number of parked cars on the pavements, people with disabilities are forced to move on the streets where they are not safe. Pavements are badly constructed and not accessible for persons with disabilities in all cases. Municipalities while constructing the pavements have to pay attention and to ensure that pavements will be wide enough to accommodate persons with wheelchairs, but also that there should not be obstacles like trees, trash containers etc. Lightning on pavements and bus stops are not always made by standards, which prevents freedom in movement for persons with visual impairments during the evening hours and does affect safety while moving and traveling in the evenings. There is a need for overall investment in human resources as the prescribed standards are not followed and the persons with disabilities, who are 30% of the total population, are excluded from activities on the local level. Women with disabilities are more discriminated than the men with disabilities.

Public transport in North Macedonia, both at the urban and intercity levels, remains largely inaccessible to persons with disabilities. Women with disabilities face additional layers of discrimination and exclusion, limiting their autonomy, mobility, and access to services. Structural barriers in the legal, infrastructural, and cultural domains contribute to the persistent marginalization of this group.

There is a critical need for comprehensive reform, including:

- Alignment of transport legislation with international human rights standards;
- Enforcement of existing accessibility laws and policies;
- Investment in accessible infrastructure and technologies;
- Inclusion of persons with disabilities, especially women, in planning and decision-making processes;
- Sensitization and training of transport staff to uphold the dignity and rights of all passengers.



CHAPTER V

Gendered green transport, findings and solutions

North Macedonia, along with the larger Western Balkan area, has become a notable source of greenhouse gas (GHG) emissions, especially from passenger transportation. Contribution to emissions in this sector rose, with an increase of 26.5% from 2014 to 2019. Diesel engines account for air pollutants that can be harmful to health and result in poor air quality. Moreover, despite the efforts made to mitigate these emissions, the country is missing integrated transport systems and greener spatial planning. Heavily imports of used cars- mostly aged above 10 years old- leading to more emissions and, hence, poor air quality.

Motorization increase is reflected through the rapid growth of the transport sector in North Macedonia with increasing number of registered vehicles, primarily passenger cars. In 2020, 66.8% of households had a car in ownership. However, this proportion continues to increase as time passes. There has been an increasing dominance of fossil fuels, especially diesel, over the past decade. Almost 57% of all passenger vehicles run on diesel. Such diesels emit slightly less CO_2 than petrol; though an older vehicle often contributes above-average pollution and greenhouse gas emissions.

Fiscal measures such as a change in the taxation of fuel and vehicles as part of a broader reform strategy can influence the uptake of electric vehicles. Also, the use of public transport, electric cars and people's perception of public transport versus private transportation can have an effect in emission savings. The number of obsolete diesel-powered vehicles, a lack of green transport infrastructure, and minimal policy support continue to pose challenges to North Macedonia's efforts to reduce emissions and progress towards environmental targets. The new Motor Vehicle Tax, which considers the amount of CO2 emitted by the vehicle type, in directing the use of electric and hybrid vehicles can also contribute to greener transport

Men are predominant direct contributors to the emissions from individual transport. There are gender differentials in obtaining driving licenses in the country. Number of driving licenses issued to men 68% are double of licenses 32% issued to women in 2023. The same trend is present in 2024. There are gender differentials in ownership of vehicles. Men tend to be much higher on the scale of ownership 82% in 2023 compared to 12% registered vehicles by women. Similarly, the transport and storage workforces are predominantly male, with only 12.8 percent of employees in the field being women.

North Macedonia has demonstrated a strong political commitment to promoting gender equality through the adoption of laws and action plans. However, significant gender disparities remain, particularly in the area of transportation and mobility. Women in both rural and urban areas face various challenges related to transportation, including limited access to public transport, poor infrastructure, safety concerns, and societal norms that restrict their mobility. These issues are compounded for women from marginalized communities and rural areas, where isolation and exclusion are common due to inadequate services. Transport habits and access differ notably between men and women, with women relying more on public and non-motorized transportation, driven by affordability and necessity. Women are also more environmentally conscious in their transport choices. Barriers such as lack of safe infrastructure, lighting, and emergency facilities further hinder women's mobility and participation.

Women are underrepresented in the transport and construction workforce.

Balkan Green agenda is aligned with the SDGs that have direct transport targets. In this sense, the national policies are to be aligned with the regional strategies linked to the greening of transportation.

The current national legal framework regulating public roads, railways, and transport infrastructure is predominantly men-centred and gender blind. Gender-neutral language is con-

sistently absent, and there is a lack of explicit gender considerations across laws and strategic documents. While there are some provisions allowing for the inclusion of gender perspectives—such as accessibility measures and mentions of social impact—these remain underdeveloped and inconsistently applied. The absence of gender-specific budgeting, Gender Impact Assessments (GIA), and dedicated measures for women as users and workers in the transport sector further highlights the need for a systematic integration of gender equality. The Positive aspects are seen in the construction law which specifically considers: the needs of persons with disabilities, safety in constructions and buildings, prescribes set of Rulebooks that defines structure of the public space including roads. In addition, rulebooks linked to construction law provide description for the set of criteria for monitoring the implementation of specific construction rules. On the contrary, Rulebook for bus stations and Rulebook for technical elements for construction and reconstruction of roads and objects on the roads are missing explanation of the prescribed designs which also affects the work of the architecture design companies, which do not consider gender sensitive construction. Lack of gender awareness, even among architecture design companies is visible in the realised construction solutions on the ground.

Gender wise, there is a limited approach of the institutions when it comes to the gender budgeting in the transportation sector. Draft Strategic Plan of the Ministry for Transport and Communications 2022-2024 considers gender budgeting for the first time. Yet, this Plan does not indicate how this gender budgeting will be implemented (beyond guidance on interventions for social housing). Most instruments are gender blind, and those that do consider gender, have a binary approach to it. City of Skopje has integrated the gender mainstreaming into its strategies, but the respective national enterprises have not integrated gender mainstreaming into their strategies and have not prepared the annual reports on the equal opportunities women and men to the Ministry of Labor and Social Policy. From this perspective we can note down that the transportation policies and actions in the country are not gender sensitive are gender neutral and do not include the interests of women.

The 2023 Budget demonstrates a strong focus on capital investment, with a total of 48.9 billion MKD (791 million EUR) allocated primarily to infrastructure development. A significant portion is dedicated to road infrastructure projects, including major motorway expansions and the continued development of Corridor 8, both eastern and western sections. Additionally, railway infrastructure remains a priority, with investments directed toward completing Corridor 10 and reconstructing parts of Corridor 8. These investments reflect the government's strategic commitment to improving national connectivity and supporting economic growth through enhanced transport infrastructure.

Total estimated funding related to climate change reaches approximately 4.6 billion MKD (75 million EUR) with budget allocations related to environmental protection, pollution reduction, wastewater and solid waste management, and green development initiatives These funds are spread across multiple government entities, primarily the Ministry of Environment and the Ministry of Transport and Communications. There is intention for support of environmental goals, but there is lack of information on how the gender perspective was mainstreamed in the budgeting process.

The budgets of the Ministries are presented without narrative how they were developed, or if consultancies were made with its users, etc. Same applies for the public enterprises linked to the transport.

Men own more cars and bicycles than women. Out of 22,6 % of the people that declare that they do not own neither car nor bicycles 79,5% are women. The car use among women is lower because majority of women don't have car (74,5%) or don't know how to use it (20,7%). However, the car is

still considered as safest type of transport for women. Besides cars, women respondent indicates buses (40,5%), walking (38,3%) and taxi (30,4%) as very safe type of transport. Women feel safest to use cars (79,2%), buses (55,2%) and taxis (53,9%) at any time of the day.

Women walk most frequently. The least used types of transport for women are taxis, bicycles and e- scooters. Women find sidewalks as somewhat safe during the day (60,4%) and not safe (43,2%) during the night.

Women find cheaper transportation options more affordable than men do. Buses are indicated as more affordable type of transport among women. 15% of the respondents to the survey use buses as a type of transport daily. Among these respondents 65% are women and 35% are men. The responses show also that women are more frequent bus users than men. Women use bus more to access health and social services.

Usage of bicycles and skateboards among women is low. 53,9% of women declare that they never use cycling and skateboard compared to the 2,7 % that use it every day. Women **feel unsafe** to cycle (66,1%) walk (55%), use taxi (37,5%) and bus (37,1%) during the night. Bicycles are not priority in usage when it comes to sustainable transport forms because both male and female respondents don't like it and because there are not enough paths, and because it's dangerous. The main reason for not using electric bicycles is that respondents don't like it. The opinion that they are too dangerous and that there are not enough paths are the subsequent responses from the respondents.

When it comes to local practices the conclusions are different for Municiplity Ohrid and City Skopje. Municiplity Ohrid, demonstrates a strong commitment to developing sustainable and inclusive transportation. It maintains an organized public transport system, adapting to seasonal needs and subsidizing less profitable routes to ensure consistent service. The municipality introduced various green initiatives, including support for cycling, expansion of bicycle lanes, and plans for electric vehicle use, particularly in the historic old town. There is subsidised student transport, public lighting, and ongoing investments in green mobility. Ohrid is actively working toward a more sustainable and accessible urban transport system, balancing ecological responsibility with the needs of residents and tourists. The Municipality has taken limited actions toward improving gender equality and accessibility in public transportation. These include bike subsidies which lack inclusivity. The current schemes do not adequately consider the needs of women, elderly, low-income, and socially excluded groups. There is lack of data, particularly gender-disaggregated statistics, to inform policies and measure progress regarding transport in Ohrid. Although the Strategy for Gender Equality outlines relevant actions, most remain unimplemented due to limited capacity, poor coordination between sectors, and underutilization of allocated funds.

The City of Skopje has a complex and multi-sectoral approach to managing transportation, involving coordination among various city departments, public enterprises, and municipal administrations. While the system includes organized public transport through JSP Skopje and private transporters, investments in road infrastructure, bike lanes, and green mobility, the city still faces challenges in traffic culture, legal coordination, and inter-municipal collaboration. Efforts toward sustainable mobility are evident through subsidies for bicycles and electric scooters, which are not delivered in an inclusive manner. There are also initiatives for bike lane expansions, which are not always according to standardized criteria for biking lanes since the rulebook that prescribes the criteria is missing. Additionally, strategies are in place to address climate change impacts and improve traffic safety, including a Vision Zero strategy for 2050 and a centralized traffic light system to reduce emissions. The observation conducted by CRPM shows results that the bus transport is predominantly used by women. In the interviews undertaken with the users of public transport in the City of Skopje, shows that they utilize it mostly for commuting to work and are represented by

people who mainly do not possess cars. Most of the respondents are not satisfied with the quality of the transport and they claim that it is overcrowded. Majority of the interviewed persons haven't witnessed discomfort or sexual harassment in the buses. Skopje has adopted the **Strategy for Gender Equality 2021–2025** and there are efforts for gender-responsive budgeting. However, the practical implementation of these commitments remains inconsistent across different sectors. Although all sectors are instructed to align their programs with gender equality principles, most lack a clear understanding of what this entails. Data collection in urban planning and transport does not include gender-disaggregated information. Public consultations for transport planning do take place, but they fail to ensure equal gender representation or input. Accessibility efforts for people with disabilities show some progress, such as ramps and tactile strips in public areas and accessible buses. However, the lived experiences of persons with disabilities may not align with official claims, indicating the need for deeper engagement with these groups. Despite a strong female presence in leadership roles within city administration, gender imbalance persists in the decision-making structures of key public enterprises, such as the Public Bus Company (JSP Skopje) and Public Enterprise Streets and Roads Skopje, where men dominate leadership and board positions. The absence of a coordinator for equal opportunities has further weakened the institutional focus on gender mainstreaming, resulting in a gap between strategic objectives and on-the-ground implementation. Overall, while Skopje has the frameworks and some infrastructure in place to support inclusive and gender-sensitive urban development, actual implementation is hindered by limited capacity, lack of gender-disaggregated data, and insufficient follow-through on inclusive practices.

Recommendations for Advancing Gender- and Climate-Responsive Transport Policy in Macedonia

- To realize significant reductions in GHG emissions, the country requires continuous investment in energy-efficient transport, active mobility solutions, and much more effective enforcement of climate-related policies on air pollution sources like transport, industries, and energy generation. This, in turn, remains to be one of the critical priorities for public health improvement as well as for reaching sustainable climate goals.
- Stronger policies are needed to bring additional pressure toward new, cleaner vehicles, encourage cleaner transport alternatives such as cycling and public transportation, and make the transport integrated.
- A comprehensive, gender-sensitive approach focused on inclusive planning, improved infrastructure, increased safety, and data-driven policies are needed.
- Allocating specific budget lines in transport and climate change programs for women and vulnerable groups.
- Prioritizing women's specific transportation needs, North Macedonia can build a more equitable, accessible, and sustainable transport system that empowers all citizens and supports broader social and environmental goals.

- To align with EU standards and ensure equitable mobility for all, the legal framework requires revision through the lens of gender mainstreaming, with clear guidelines, updated assessments, and inclusive planning at every stage of transport development and policy-making.
- There is a need for real implementation of the gender responsive budgeting on national level in the planning of the transport and climate change policies.

The situation requires changes. The fact that women represent majority of clients when it comes to bus transport, and the fact that women feel safer when using buses than when walking, indicates the need for higher investments in improvements of infrastructure and quality of bus services. There is a need for improvement of overall transport related infrastructure, which requires higher budgets allocations across different stakeholders for improvement of transportation infrastructure on local and national level.

- In Ohrid there is a need for improvement of the inclusivity of the set subsidies, expansion of bicycle infrastructure and enhancement of electric vehicle facilities. A more inclusive and coordinated approach, supported by robust data collection and a revised feasibility study, is needed to ensure accessible and equitable transport for all citizens.
- In Skopje, there is needed improvement in infrastructure maintenance, integration of vulnerable groups, and stronger cooperation between city and municipal levels.
- The transport system in Skopje requires continued investment, legal reform, and inclusive planning to meet future demands effectively. There is a need for adoption of the Rulebook for the development of cycling in the city.
- There is a need for revision of the approach to provide access to the vulnerable groups of citizens including also women.
- Engagement with the City's Coordinator for Equal Opportunities in all stages of planning, budgeting, and evaluation is crucial.
- Strengthening coordination, leadership continuity, and sector-specific gender training will be critical to translating policy into meaningful outcomes, specifically by engagement of the coordinator for equal opportunities.

Finally sex-disaggregated data must underpin all transport and climate policies. The state should conduct regular mobility surveys disaggregated by gender, age, disability, and region. Include women, especially those from underrepresented groups, in policy consultations and monitor safety perceptions and behaviors in transport systems, particularly at night and in rural areas.

Approximation of costs for Advancing Gender- and Climate-Responsive Transport Policy in Macedonia

As was concluded, several measures are needed to improve the conditions in order to expand the usage of green transport and make it gender and climate responsive. Both cities Skopje and Ohrid have certain specifics, and the design of different measures is needed to bridge the gap and to increase the usage of green transport.

Approximation of costs for projects in Ohrid

In case of Ohrid among others, this report is emphasizing the following measure needs to be taken as key:

- need for improvement of the inclusivity of the set subsidies
- expansion of bicycle infrastructure

1. Inclusivity of the subsidies means that people that do need them most should have priority to get them. Besides having criteria which favourites the ones that are in the most need, the subsidized being gender and climate responsive should first the ones that have other need besides only transporting from one to another destination within cities. These needs usually are related to transporting children from and to kindergartens or schools and other extra school activities, shopping for groceries and other supplies as well as being able to transport other bulky objects. Bearing in mind these needs, the subsidies should be applied to purchasing baskets for bicycles, trailers and children's bicycle seats. They will allow more flexibility in the usage of bicycles as well as being able to use them for everyday needs.

Approximation of costs for additional subsidies to enhance usage of bicycles			
Description	**Price**	**Proposed annual quantity**	**Estimated annual value**
Bicycle baskets	25 EUR	200	5.000 EUR
Bicycle trailers for 2 kids or extra luggage	200 EUR	50	10.000 EUR
children bicycle seats	60 EUR	200	12.000 EUR
Total Estimated Annual Subsidies			27.000 EUR

2. Expansion of bicycle infrastructure in Ohrid as analysed is requested to ensure greater usage of bikes. The current bike lanes are too narrow which is making users not feel secure and comfortable to use. Also, the infrastructure should be additionally expanded. The current cost per km of bike lanes in Ohrid is 32.575 EUR per km being calculated on the basis of the costs made so far i.e. the current bike lanes are 23 km throughout the city, and the investment in the network so far is 749.186 EUR. The following insights into bike lane construction costs in Eastern and Southeastern Europe are revealing that the money spent on bike lane construction in Ohrid is well below the average in the region and Europe as general. For instance, In Szentendre (near Budapest), a bike lane cost €706.000 EUR/km. Between Dunakeszi and Budapest, costs were around 56.000 EUR/km. In Tolna County, it reached approximately 735.000 EUR/km, and another route was priced at 827.900 EUR/km. According to Europe-Wide Variation (European Cyclists' Federation & MobiliseYourCity, basic cycle tracks start from under 50.000 EUR/km but can exceed 10 million EUR/km when major civil works are included. The following table gives an overview of the type of work that should be undertaken to build a kilometer bike lane and estimation of cost range.

Region / Project Type	Cost Estimate (bike lanes/ km)
Painted/simple lanes	30,000 EUR - 50,000 (EU typical low end)
Hungarian urban bike lanes	565,000 EUR - 827,900 EUR
Dedicated cycle superhighways (EE/EU)	300,000 EUR - 800,000 EUR
High-end with major civil works	800,000 EUR - 10 million

The range is quite high but having in mind the landscape of Ohrid and the type of work that has to be done the estimation is the in the city the bike lanes could cost up to 50.000 EUR per km and up to 120.000 EUR the surroundings of the city on the local roads.

Approximation of costs for projects in Skopje

1. In Skopje, a primary need is improvement in infrastructure maintenance. Maintenance is very important for the safety of the users as well as to attract more people to opt for bikes as transport means. Maintenance categories could be divided in the below four:

- Routine upkeep: sweeping, pothole/crack sealing, line repainting
- Winter services: snow clearing, de-icing
- Periodic resurfacing: possibly every 10–20 years
- Ancillary systems: drainage upkeep, clearing debris

Direct local data and regional data suggest that the maintenance should be from EUR 1,000–1,500 per km per year, rising to 2000 EUR if winter services are included. For accurate budgeting, Skopje should model maintenance on these benchmarks and adjust lane complexity and usage levels as well as winter severity.

2. Stimulating the use of bikes should be done by making it adequate for the needs of transport usually related to transporting children from and to kindergartens or schools and other extra school activities, shopping groceries and other supplies as well as being able to transport other bulky objects. Bearing in mind these needs, the subsidies should be applied to purchasing baskets for bicycles, trailers and children's bicycle seats. They will allow more flexibility in the usage of bicycles as well as being able to use them for everyday needs.

Approximation of costs for additional subsidies to enhance usage of bicycles			
Description	**Price**	**Proposed annual quantity**	**Estimated annual value**
Bicycle baskets	25 EUR	2000	50.000 EUR
Bicycle trailers for 2 kids or extra luggage	200 EUR	500	100.000 EUR
children bicycle seats	60 EUR	2000	120.000 EUR
Total Estimated Annual Subsidies			270.000 EUR

Finally, stronger policies are needed to bring more expanded public transportation, and make the transport integrated. Public transportation should not be understood as a separate model for transport and as excluding mode of transport with the Bikes or walking, but rather as an integrated mode. Bikers and walkers can choose to use multiple modes of transport if public transportation is compatible. This means that buses should be equipped and designed to easily load a bicycle inside and stored in an appropriate place on the bus. This initiative should mean that all new buses which will be purchased will have low – floors to ease the loading of the bike or special equipment or a place for bicycles where it could be placed during the ride. It should be regulated with a rulebook or adequate buy law. Implementation of this initiative should be gradual as the cost for immediate implementation is really high and could trigger a very high impact on the budgets of the city or other companies which are working on public transport in Skopje.

Annex 1. List of stakeholders

City of Skopje	Public Enterprise „Parkovi i zele-nilo“-Skopje	parkovi@t-home.mk	Phone: 02 3062293 Phone: 02 3070112 / 3064688	Not consulted
	Public Enterprise “City Parking” - Sko-pje	infogradski@gradski-parking.com	Phone number: 02 3091072; 3091074	Not consulted
	Public Enterprise “Streets and Roads” - Skopje	info@uip.gov.mk	Phone: 3162-317;	Not consulted
	Public Transport Company - Skopje	jsp1@jsp.com.mk	Phone: 3174-264; 3174-260	Not consulted
	TRAFFIC SECTOR CITY OF SKOPJE	zorand@skopje.gov.mk, Jane.Ilijoski@skopje.gov.mk	Phone number: 02/3297-309; 02/3297-309	Consulted
	SECTOR FOR THE PROTECTION OF THE ENVIRONMENT AND NATURE	sonja.cvetkovikjcholakova@skopje.gov.mk	Phone: 072-319655, 02/3297-301	Consulted
	Department for Ambient Air Quality, Climate Change Adaptation and Reduction, Noise and Non-Ionizing Radiation Protection	goceg@skopje.gov.mk	Phone: 02/3297-273	Consulted
	Department for protection and promotion of nature and greenery	Slagjana.Georgievs-ka@skopje.gov.mk	Phone: 02/3297-302	Consulted
	SECTOR FOR URBAN PLANING	Ivana.Bajkova.Shalja@skopje.gov.mk	071272940	Consulted
	Deputy Head of sector	Vladimir.Strezovski@skopje.gov.mk	072272423	Consulted

City of Ohrid	Coordinator for equal opportunities	Magdalena Stojanovska Magde982@gmail.com		Consulted
	Sector for traffic and communal works	Zoransikaloski@ohrid.gov.mk		Consulted
	Sector for tourism and local economic development Gjoko Apostolov	infotler@ohrid.gov.mk		Consulted
Ministry of Environment and Physical Planning	Head of sector for financial matters	m.krstevski@moepp.gov.mk>	075/221-216.	Consulted
Ministry of Labor and Social Policies	Sector for equal opportunities Head of department for gender responsive policies and gender responsive budgeting	gabriela.madzoska@mtsp.gov.mk		Consulted
Agency for protection of the right for free access to infomation	MARIJA Jakovlevska Minitry of Interior	mvrjavnost@gmail.com	071 395 908	Consulted
	Ministry of transport and communications	dragan.simonovski@mtc.gov.mk; blagica.okolic@mtc.gov.mk	02/3145-436 071/289-499	Consulted

Annex 2: National Legislation, policy documents and strategies related to transport an environmental protection

Law for equal opportunities of women and men (Official Gazette 166/2014)

Law on budgets (Official Gazette 203/2022)

Rulebook for gender responsive budget statement

Gender Equality Strategy

National Developemnt Strategy

Draft Strategic Plan of the Ministry for Transport and Communications 2022-2024

Law for public roads, (Official Gazette 84/08)

Law for road transport (consolidated text)

Law for agreements in the road transport (OG.23/2013; 156/2015)

Law for safety and health at work (consolidated text)

Law for road traffic safety (OG 169/15 consolidated text)

Law on railway system (OG 91/2013)

Law for safety in the railway system (OG 47/2010)

Business plan 2022 Macedonian Railways Transport

Rulebook for technical elements for construction and reconstruction of roads and objects on the roads. (OG 110/ 09).

Law for Environmental Protection and set of rulebooks related to EIA/SEA procedures and contents

National Transport Strategy 2018-2030

Annual Programme for construction. Reconstruction, rehabilitation, maintenance and protection of public roads for 2024